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ABSTRACT.

ABSTRACT

FROM THE

RETURNS OF AGRICULTURAL SOCIETIES

IN

MASSACHUSETTS,

FOR THE YEAR 1846.

BY JOHN G. PALFREY,

SECRETARY OF THE COMMONWEALTH.

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ADVERTISEMENT.

The Returns from Agricultural Societies required by the Act of 1845, chap. 111, were all made for the year 1846 within the time specified by that law.

The General Court of 1847 has enacted the following law (Chap. 69):

AN ACT RELATING TO AGRICULTURAL SOCIETIES.

Sect. 1. Every agricultural society which shall claim the bounty of the Commonwealth, according to the provisions of the first section of the forty-second chapter of the Revised Statutes, shall, annually, on or before the tenth day of January, file in the office of the Secretary of the Commonwealth a certificate, signed by the president and treasurer of such society, specifying, under oath, the sum actually contributed and put at interest, and then held, well secured as a capital stock.

Every such society shall, at the same time, make a full return of its doings, signed by its president and secretary, embracing a statement of the expenditure of all money, specifying the nature of the encouragement proposed by the society, the object for which its premiums have been offered, and to whom they have been awarded, and including all reports of committees, and all statements of experiments and cultivation, regarded by said president and secretary as worthy of publication. The return, whether in printed or manuscript form, shall be marked in such manner, that those passages in the several reports and statements, deemed by such officers most worthy of public notice, study and application, may be easily distinguished.

Sect. 2. The amount of bounty to which any agricultural society may be entitled for the year one thousand eight hundred and forty-seven, shall be ascertained by the certificate to be filed in the month of October, according to the provisions of law as heretofore existing; and, for the year one thousand eight hundred and forty-eight, and each year thereafter, by the certificate previously filed by such society, according to the provisions of this act.

Sect. 3. Any agricultural society which shall neglect, in any year, to comply with the foregoing provisions, shall forfeit its claim to the bounty of the Commonwealth the year next succeeding.

Sect. 4. The Secretary of the Commonwealth is hereby directed to cause to be made and published, in each year, for distribution, as full an abstract as, in his judgment, will be useful, from the returns aforesaid of the agricultural societies.

Sect. 5. Any person who shall incur the forfeiture mentioned in the ninth section of the forty-second chapter of the Revised Statutes, may be prosecuted, by complaint before any justice of the peace who shall have jurisdiction thereof; and all forfeitures so recovered shall be, by said justice of the peace, paid over to the county treasurer for the use of the county.

Sect. 6. The Secretary of the Commonwealth is hereby directed to transmit a copy of this act to the secretary of every incorporated agricultural society in the Commonwealth, on or before the first day of September next.

Sect. 7. The thirty-first chapter of the acts of the year eighteen hundred and forty-two; also, the one hundred and eleventh chapter of the acts of the year one thousand eight hundred and forty-five, and all parts of acts heretofore passed, inconsistent with the provisions of this act, are hereby repealed.

Accordingly, the only papers henceforward to be transmitted by Agricultural Societies to the Secretary's office are the certificate and return required in the first section; and both are to be filed annually, on or before the tenth day of January. But the certificate, to determine the amount of the Commonwealth's bounty for the present year, is to be filed some time in the month of October.

Some suggestions concerning the character of the returns hitherto made, and the improvements of which they are susceptible, are contained in the following letter from the Hon. Allen W. Dodge, of Hamilton, who has again afforded me his valuable aid in the preparation of the Abstract.

" In obedience to your request, I proceed to give you such views as have suggested themselves to me, relative to the agricultural returns, and the improvements which may be made in them. The experiment of compiling, in a single volume, the transactions of the several Agricultural Societies in the Commonwealth receiving its bounty, has been made in conformity with the act of March 7, 1845, and has met with the general favor of those interested in the pursuit and the advancement of husbandry among us. In the new volume now issued, exhibiting a summary of the returns of 1846, will be found a record of the material facts marking the history, for that year, of the several societies, and pointing the way to future progress. It was not, perhaps, to be expected that any great improvement would be exhibited in the returns contained in the present volume over those published in the preceding. If the publication of these returns, in the manner contemplated by the act of 1845, is to exert, as it is believed it will, a beneficial influence in this respect, a single year is hardly a sufficient time for its development. Something has been done, but much remains to be accomplished, in the preparation of exact statements, and well matured reports, on almost every subject for which premiums are offered by our Agricultural Societies.

It has been suggested, that, in the reports concerning stock and manufactures, it is difficult to select passages worthy of public notice, study and application; as the applicability and force of the remarks of the committees on these subjects can only be understood by those who have seen the animal or article referred to, and can convey but little information to a stranger. But that little information, like the discovery of a single truth, will often lead to important results. The reports, too, of committees, are not necessarily confined to the merits of the particular animals or articles embraced in them, and to the award of premiums. There are facts and experiments within the knowledge of almost every member of an agricultural committee, which may be, and often are, made to impart additional interest and value to the result of their labors, as exhibited in their report. It is by pains-taking here, by each member of a committee submitting his views in conversation or in writing, to the chairman, before the report is to be acted upon, that he will be able to draft one which will contain a large amount of useful hints and practical information. Reports prepared only on the day of the fair, amidst the hurry of other pressing duties, must, of necessity, be comparatively meagre and deficient in these respects.

Indeed, it would seem, such is the interest now taken in every branch of husbandry, that greater demands were to be made of our Agricultural Societies for information, which their committees may well be supposed to possess on the various subjects submitted to their consideration. Recently, at one of the agricultural meetings usually held in the State House during the session of the Legislature, a resolution was offered to petition the Legislature to appoint a commission to examine the different varieties of fruits, make a choice selection, and point out the best modes of culture. The committee appointed to consider the subject, (Hon. George Denny, chairman,) in their report say: 'Of the importance and benefit, to the citizens of the Commonwealth, of the information proposed to be obtained, there can be no difference of opinion. There are ten incorporated Agricultural Societies in the State, who receive annually something from the treasury of the Commonwealth, through which might (and perhaps should) be received valuable information of the kind contemplated by the resolution; which information could be obtained without much expense to the societies, and placed before the people at the expense of the Commonwealth, under that excellent law requiring returns from those societies receiving the bounty of the State, and an abstract to be published by the Secretary of the State.' Here is evidence of the work that is expected of our Agricultural Societies in but one department of agriculture.

The wants experienced by those more interested in other departments are, doubtless, equally pressing, and their demands for information, if expressed, would be, perhaps, as urgent. The question, for example, is now attracting great attention, 'What breed of milch cows is best adapted to the soil and climate of Massachusetts, and the most profitable for its dairy stock.' The Massachusetts Society has imported a number of animals of two of the best foreign breeds, in order to test their qualities in this country, and from which it is propagating, with the view to answer satisfactorily, as far as the experiment goes, this very question. The facts which may be collected by the different Agricultural Societies in the State, representing, as they do, its different sections, the opinions which may be formed and the judgments sanctioned in the reports of their committees on this subject, and the fulness and the accuracy of the statements of the owners of particular cows offered for premiums, have all a tendency, and a strong tendency, to settle this question so important to the agricultural interests of the Commonwealth.

If the cause of agriculture has been constantly advancing in the Commonwealth, under her wise and fostering care, and through the intelligence and industry of her cultivators, still it has been somewhat retarded by the greater facilities supposed to be possessed here for manufacturing and commercial enterprise. The deficiency of the harvests in Europe the last year,—the failure especially, for two successive years, of the potato crop in Ireland,—have created an unusual demand, at the present time, for the agricultural products of this country, and that, too, for some of these products, where, heretofore, they have sought a market with but limited success. Only a few years since, a writer in Loudon's Magazine said, of Indian corn, that it produced only the scurvy in man and the mange in swine. This prejudice is now dispelled; the hand of those that are famishing is eagerly extended to receive, as a precious boon, the food which was once rejected by them as unfit for animal sustenance. It is but reasonable to anticipate that the market thus opened for our Indian corn, as well as many other of our agricultural products, will continue to be permanent long after the horrors and devastations of famine shall have passed from the lands now visited by it. Providence thus seems to be teaching that the interests of agriculture may not be neglected for other more lucrative pursuits, and that the highest efforts are demanded of those to whom these interests are committed."

The present Abstract has been made up on substantially the same principles as that for 1845. All the addresses before Agricultural Societies during the year, with one exception, having been already given to the public in print, and the volume being nearly of the size of the former, it seemed best to discontinue this part of the plan of last year. On the other hand, I have added a list of officers of the several societies for the current year,—with the exception of Trustees, who, in some societies, are numerous,—which, besides answering other purposes, will be of use to such as have occasion to address them by letter. It would be useful if the secretaries, along with the returns, would transmit lists of officers. For the present year, they have been obtained by application to the several societies. It is also desirable, with a view to the compilation of the Table of Premiums, that the Returns should exhibit lists of the premiums *offered*, as well as those awarded.

J. G. P.

SECRETARY'S OFFICE,
March 15*th*, 1847.

ABSTRACT.

ABSTRACT.

MASSACHUSETTS SOCIETY FOR PROMOTING AGRICULTURE.

The return of the doings of this Society consists of the following reports, and extracts from reports, which are published entire.

The undersigned, as Recording Secretary of the Massachusetts Society for promoting Agriculture, respectfully reports:

That, in compliance with the requisitions of the Statute of March 7, 1845, chapter 3d, he herewith returns to the Secretary of the Commonwealth those reports made to the Trustees of said Society, which will exhibit to the Government the transactions of the Society for the past year, and the prospective benefit which the agricultural community may derive from their labors. In the report of last year, it was stated that the Trustees had, as far as they were able, accomplished what they had intended, in offering many and large premiums, to stimulate inquiry and elicit information on a variety of subjects in which farmers were interested. They, therefore, determined to concentrate their efforts upon one object—that of improving, by importation, the breed of cattle, and most especially the milch Cows of the Commonwealth. Most of the reports relate to the care of the imported Stock, and the purchase and care of the best native Stock, to be improved by crossing.

If it be true that he who makes two blades of grass grow, where only one grew before, is a benefactor to his race, surely he who, by skill and management in the economy of animal nature, obtains from the same quantity of grass two quarts of milk, where only one was had before, confers a greater blessing. No one can doubt that, by observation and patient experience, the races of animals which man has reduced to his own use, may, by care through successive generations, be reared and bred for particular purposes. In confirmation of this, those who are old enough may remember the long wool scantily spread over the lank body and long limbs of the native sheep, so called, being the only sheep, some thirty years ago, to be seen at Brighton, and contrast them with the smaller and more compact bodies with their thicker and finer fleeces, by a cross with the Merino, now the only sheep to be seen there, and they will feel assured that, by time and care, a race of animals may be entirely changed. This proof of the value of importing males is conclusive. A Merino ram of the same character in form, fleece and blood, which, when they were first imported, would bring one thousand and even fifteen hundred dollars, is not now worth more than one fortieth part of a thousand dollars.

The power to breed animals for particular qualities is most striking, and has been exercised with the greatest success in the horse and dog, and their value is more determined by the purity of the blood than by any other single character. Our farmers adopt the principle in their sheep and their swine. The extension of the knowledge of the Merino sheep, and the Mackay breed of swine, was as widely diffused as possible, by the offers and awards of premiums upon them by the Massachusetts Society for promoting Agriculture; nevertheless, there seem to be many practical doubters, among the farmers, of the success of the same principle in regard to cows. Very few, indeed, have ever preserved a breed pure, long enough to test its properties. In the 4th volume, page 153, of the society's publications, there is an article by Dr. Parry, on crossing the breed of animals, in which he asserts that entire reliance cannot be had on the progeny of a breed by crossing, until the fourth, and, in sheep, the fifth generation. The same volume, page 331, contains a detailed account of a most extraordinary English cow of the Sussex breed, which, in five successive years, yielded 24,428 quarts, exceeding an annual average of 4885 quarts, and a daily average of thirteen quarts for 1825 successive days.

By the report of the committee on the diseases of animals, it will be seen that the Trustees have authorized the importation of a manufactured figure of a horse as large as life, showing the relation and action of every joint, and all the muscles, nerves, arteries, &c. as well as the larger organs, and also a complete skeleton, prepared in Paris, of both the horse and the cow.

Those portions of Mr. Phinney's monthly reports, stating the sickness and death of one of the most valuable imported cows, and the long-continued sickness of one of the bulls, with the great difficulty he had in obtaining aid and advice, confirm the judgment and foresight of the committee in thus laying the foundation for veterinary instruction in this Commonwealth.

Respectfully submitted.

BENJ. GUILD,

Recording Secretary of the Massachusetts Society for Promoting Agriculture.

Boston, December 31, 1846.

REPORT OF THE EXAMINING COMMITTEE.

The committee appointed by this Board, for the purpose of examining the cattle imported by this Society, and recommending the best course to be pursued for their preservation and increase, have attended to that duty, and beg leave to report that they have visited Mr. Phinney, at Lexington, (in whose charge the herd has been placed,) and found the animals in excellent order, giving evidence of care and skill in their management.

The committee entertain no doubt of the expediency of maintaining the stock where it is placed, from its proximity to Boston, and the good care that may be expected to be taken of it, provided a favorable contract could be made with Mr. Phinney. After a full and free conversation with him upon the subject, and obtaining information from other gentlemen residing at a greater distance from the city, in regard to the price that should be paid for its keeping, the committee came to the conclusion to accept the proposition tendered by Mr. Phinney; namely, for every animal more than two years old, two dollars per week; and for every animal less than two years old, one dollar per week:—this arrangement to continue for one year from the first day of July last.

The committee feel deeply the necessity of improving the breed of milch cows in this Commonwealth, and believe it can be done to a considerable extent by the steady and persevering efforts of this Society. They are not unmindful of the trust committed to them, and desire to discharge it in a manner that shall best promote the permanent interests of the Commonwealth. They therefore recommend that the herd be kept together till the autumn of next year, and that sales be made, at that time, of that portion of the stock that may be deemed in a saleable condition.

The committee also recommend the purchase of from six to ten native cows of the highest class as milkers, that we may have a cross of the foreign blood. It is believed that native cows may be obtained at a price not exceeding seventy dollars, and from that sum to forty dollars. For these prices, we can obtain a stock of milch cows greatly superior to those generally possessed by the farmers of this State. The committee are impressed with the great improvement that may be made in this branch of our agricultural economy, and entertain the conviction that the best application that can be made of the funds entrusted to their care for the improvement of the agricultural interests of our State, is to apply the means we have in improving the quality and increasing the number of milch cows.

In conclusion, the Committee ask of the Board that a fair experiment may be made, which, if consummated, they have full confidence, will promote the best interests in this branch of our State economy.

ABBOTT LAWRENCE,
JOHN C. GRAY,
DAVID SEARS,
J. C. WARREN,
HENRY CODMAN.

October 10*th*, 1846.

On the Anatomy and Diseases of Animals.

The Committee beg leave to report that, in conformity with the directions of the Trustees, they have inquired into this subject. They find that there has been lately completed, in Paris, the figure of a horse, of full size, so constructed as to take all the pieces apart. These pieces represent the muscles, blood-vessels, heart, lungs, and other organs, of their natural size and appearance. They are composed of materials of an imperishable nature, and, when put together, form a beautiful object. The cost of the work is 4000 francs, or 800 dollars.

The Committee, believing that there is no similar work in this country, and that this will be of great use in displaying to practical men the anatomy of the different organs which may be the seat of various diseases, have thought that its acquisition would be a benefit to the agricultural interests of the country. They have, therefore, agreeably to the directions of the Trustees, procured this work, and ordered it to be shipped by the first vessel direct for Boston.

The Committee, seeing the great importance of an exact knowledge of the bones of the ox and the horse, have also directed the preparation of full-sized skeletons of these animals. These are expected to be completed by the next spring. The Committee propose, when these objects are all arrived, they should be placed together in some convenient situation, and be made accessible to the agriculturalist without expense.

The Committee would further state that Dr. Brooks, whom the Committee have invited to give a course of lectures on the diseases of the horse, is actively engaged in preparing these lectures, and will probably be ready to give them the next winter. They have also requested Dr. Brooks to select, and bring home, all such works as may be useful for the breeding of horses and cattle, and the treatment of their diseases.

In behalf of the Committee,

JOHN C. WARREN.

December 24th, 1846.

On the Introduction of a New Grass.

The Committee to whom was referred the letter and communication of P. L. Simmonds, Esq., a corresponding member of the Society, resident in London, report:—

That the interest manifested by Mr. Simmonds, in the prosperity of the agriculture of Massachusetts, is highly appreciated.

Mr. Simmonds's communication mentions a species of hardy grass, called Angola grass, suitable for fodder, cultivated in Brazil, and which has lately been introduced into Ceylon, which he thinks might be advantageously cultivated in Massachusetts. The Committee are fully sensible of the importance and necessity of obtaining fodder more succulent, and abundant, than the natural grasses afford, and on inquiry they find that a quantity of the seed of this variety might probably be procured without much delay or expense, and they accordingly recommend that a sufficient quantity of the seed be procured, in order that a fair experiment may be made.

E. PHINNEY,
D. P. KING.

November 14th, 1846.

Extracts from Mr. Phinney's Monthly Reports.

The Ayrshire cows and bull are all in fine health and condition. One of the cows, "Charlotte," was not in calf when she arrived. She has since been served by "Prince Albert," and is now probably in calf.

The subscriber regrets the accident which occurred to the Ayrshire cow "Jeannie Deans," which was that of slipping her calf on the night of the 10th of December last, after having advanced about five months in her pregnancy. No satisfactory cause can be assigned for this premature birth. She is, to all appearances, the healthiest cow, and the greatest feeder, in the flock. Being the master cow, she could not have been injured by the other cows. She met with no accident known to the keeper. Among twenty cows kept by the subscriber, but one instance of abortion has occurred for twenty years past.—*January* 1, 1846.

One of the Ayrshire cows, "Mirly," which is probably the best of the four Ayrshires, calved yesterday, and has given us a fine heifer calf. The cow and calf are doing well.—Mirly will no doubt do all that was anticipated of her. The size and form of her milk-vessels have astonished every one that has seen her. Twelve quarts of milk were drawn from her within two hours after calving, and still her monstrous udder was apparently but little reduced in size. This cow alone, if properly appreciated, is of more value to the country than the cost of the whole four.

The subscriber is aware that some alarm may exist in the minds of some on account of the expense of keeping the stock imported, and it may be viewed by them as an appropriation of the funds of the society of questionable expediency. But when it is considered that we have annually expended, in premiums, quite as large a sum as will be the annual expense of keeping the stock, and from which we have no return, and, to say the least of it, the result is of quite as doubtful utility as the measures we have adopted for the improvement of stock, it would seem that the outlay for keeping, and for which we may be nearly if not wholly remunerated, should not be a subject of alarm or doubtful expediency.—*April*, 1846.

Since the last meeting of the Trustees, the subscriber regrets the necessity of having to state the loss of the society's Ayrshire cow, Charlotte. Up to the 24th of July, the stock, to all appearances, were healthy and doing well. On that day, the

Ayrshire cow, Charlotte, calved, having overrun her time twelve days. The calf (a bull) from Prince Albert, the society's imported Ayrshire bull, is a fine animal. The moment the calf was dropped, the cow attacked it with great fury, and, but for the interference of those about her, would have inevitably destroyed it, and, for some hours after calving, seemed in a perfect phrenzy. In the evening she took some warm drink and appeared more calm. The next morning she refused to eat. An experienced farrier was sent for, and, on examining her, he pronounced her sick with what he called the "horn-ail." He bored her horns, but no blood followed. She was then bled freely in the neck, and cooling medicine was administered, which operated kindly, but all to no purpose. She died the next morning, being the 26th of July. After her death, she was examined, and the horns were sawed off. No disorder appeared, except in the horns; the pith or vascular substance, which completely fills the horn of a healthy animal, was found to be entirely decayed. This no doubt operated upon the brain, and produced what is termed, in the books which treat upon the subject, a "phrenzy fever," with which she died. The calf is doing well.—*August 8th*, 1846.

At the request of the Middlesex Society of Husbandmen, the whole stock was exhibited at their Cattle Show at Concord, on Wednesday last. Ten hands were employed, at the expense of the Middlesex Society, in leading and driving them to Concord and back. They endured the journey remarkably well, and were all returned without the slightest injury to any one of them. The collection of farmers was very large, the cattle were much noticed, and, from the remarks that were made, the subscriber believes they fully answered the public expectation.—*October 10th*, 1846.

The imported stock is all doing well, with the exception of the North Devon bull, "Bloomfield." This animal was attacked, about two weeks since, with a slight difficulty of breathing, attended by a wheezing and some cough. This at first was supposed to be no more than a common cold or catarrh. With a view, however, of stopping its further progress, he was bled freely and physicked, these being the remedies prescribed by the books which treat upon the diseases of animals. The remedies applied, however, seemed to produce but little effect, and the disorder now seems to be approaching to a "bronchitis," a disorder not uncommon among cattle in England and Scotland, especially among those which are kept upon low and marshy grounds, and not unfrequently proves fatal. Should it turn out to be bronchitis, which is a disease of the windpipe and bronchial tubes, it will be reached with great difficulty, and will in all probability prove fatal. Mr. Youatt states, that, to young cattle, bronchitis is peculiarly distressing. If they be bled and physicked, the symptoms sometimes are abated, but, in most cases, remedial measures are applied in vain.

At present, however, his appetite is good, and he exhibits none of those external marks which are said usually to accompany a fixed bronchitis. The animal could not have contracted the disorder from exposure to low and marshy grounds, having been uniformly kept in the stall, except when turned out to drink, or for exercise.

The best farriers in the neighborhood have been consulted. Bronchitis is said to destroy thousands of cattle in the West Indies, and is there considered so fatal, that no cure is attempted. —*November* 14, 1846.

Soon after the last meeting of the Trustees, Mr. Robert Wood, a respectable veterinary surgeon, of Lowell, at the request of the subscriber, visited the animal [the North Devon bull, Bloomfield], and, on examining, gave his opinion, that the disease was not bronchitis, but an enlargement of the glands about the larynx, which occasioned the difficulty of breathing, and prescribed bleeding and physicking, and also an external wash, to be applied to the part which he considered to be affected. These remedies did not produce the desired effect, giving only a temporary relief. On Tuesday last, he visited the bull for the third time, accompanied by an elder brother, Mr. Wood, of this city, who is said to possess great skill, and have much acquaintance with the diseases of animals. The opinion now seems to be that the disease is bronchitis. He directed medicine of a much more powerful nature than that formerly prescribed, and also applied a seton to the part nearest to the bronchial tubes. Under the operation of these remedies, the animal is apparently much relieved, and it is hoped may be eventually cured.

The Ayrshire heifer, "Gowan," purchased at Captain Randall's late sale of Ayrshire stock, calved on the 17th November last. The calf, a bull, was of large frame, though very poorly provided with muscle ; had no use of his limbs. But by care and nursing he now stands erect on his fore legs, though still, in the hind legs, some crippled. He eats heartily and thrives well, has a fine head and shoulder, and will, with a little more straightening of the hind legs, be a valuable animal. The cow has done well, and promises to become a first-rate milker. She in now in calf to the bull "Prince Albert."

It was stated, at the last meeting of the Trustees, that the native cow, Lady Washington, from Montpelier, had received an injury in her milk-vessel. From this she is now recovering. The rest of the society's stock are doing well. An addition of three calves is expected by the first of January next.—*December*, 1846.

It will be recollected that, early in the year 1845, the Trustees of the Society, after mature deliberation as to the objects to which the income of the society's funds should be appropriated, came to the unanimous conclusion that in no way could they so essentially promote the interests of agriculture, and contribute to the wants of the farmer, as by appropriating their income to a purpose that would tend, as they believe, to improve the quality of cattle, particularly of dairy stock.

With this view, a competent agent was engaged, to proceed to Europe and make the selection, from the Ayrshire and the North Devon breeds of cattle, which, under all circumstances, the Trustees believed to be best adapted to this country. Accordingly, in October, 1845, Mr. Alexander Bickett, who had been appointed to make the selection, and purchase, and superintend the importation, arrived in Boston, bringing with him four cows and a bull of the Ayrshire, and four cows and a bull of the North Devon breeds. They all reached this country in fine condition, and were taken to the farm of the subscriber, in Lexington, where they all now remain, with the exception of one of the Ayrshire cows, which died suddenly in July last, a short time after calving.

The advantageous circumstances under which the selection and purchase were made by Mr. Bickett, and the character and pedigree of the respective animals, having been fully stated in a former report, it may be unnecessary to state them here.

At the sale of Capt. Randall's Ayrshire stock of cattle at New Bedford, in October last, the Trustees purchased a cow and a three year old heifer of the Ayrshire breed. The cow, "Swinley," was imported by Capt. Randall, at a high cost; and, judging from her pedigree, and the prizes that have been awarded to her in Scotland and in this country, she is undoubtedly one of the best cows ever imported. The heifer is one of the descendants of "Swinley," and promises to be equal, in all respects, to her mother.

As a further means of promoting the object which the Trustees have in view, early in this year they voted to appropriate the sum of five hundred dollars to the purchase of a number of the best native cows, for the purpose of cross-coupling with the imported bulls. In pursuance of this vote, five native cows have been purchased at an expense of three hundred and ninety dollars. The stock owned by the society now, therefore, consists of five cows, and a bull and five calves, of the pure Ayrshire breed, four cows, and a bull and four calves, of the North Devon breed, and five native cows,—in all, twenty-five head; namely, eleven of the Ayrshire, nine of the North Devon, and five of native breed. The imported stock endure the cold of our winters, and seem in all respects quite as hardy as our native cattle.

The Ayrshire, as a dairy stock, have fully answered all that was anticipated of them. The desire of the Trustees being to multiply this stock as fast as practicable, no means were taken to force their milk by high feeding, having been kept in the spring and summer months mostly on dry feed, and every measure taken to dry them off as soon as possible. They notwithstanding gave a great yield of very rich milk, Flora McDonald yielding twenty-two quarts, and Mirly twenty quarts a day in one week after calving. They are now in calf to the Ayrshire bull, Prince Albert, two of whose calves prove to be fine animals.

The North Devons are a very hardy and beautiful race of cattle, not so deep milkers as the Ayrshire, but for vigor of constitution, fine appearance, and all the useful purposes of farm stock, they are a very valuable breed of cattle. The females of the North Devon breed, with the exception of one which dropped her calf on the passage from Europe, were all heifers, in calf for the first time when purchased, and do not, as yet, afford the means of judging as to the quantity of milk they will yield at a maturer age. But, from the high condition of their calves while kept upon their milk, there can be no doubt of its being of a very rich quality. We have a heifer and three bull calves of this breed, which, for hardiness of constitution, symmetry of form, richness of color, and general beauty of appearance, it is believed can hardly be excelled by any race of animals.

In the purchase of native cows for the purpose of crossing with the society's imported bulls, regard has been had to such qualities and points as are considered most desirable to perpetuate. From some experiments which have been made within the knowledge of the writer, it is confidently believed, that a stock may be raised from our best native cows, and the pure bulls of foreign lands, that will equal if not exceed any that has been imported. It is hardly to be expected, that the owners of stock in foreign countries will consent to part with their best cows. They can seldom, if ever, be obtained at any price, while bulls, of which there is most always a surplus, can be obtained, of first-rate stock. By putting these bulls to the best milkers among our native cows, we may chance to get a stock that will inherit the good qualities of both. We cannot, it is true, calculate with a certainty, as in the noted breeds of foreign cattle which have been kept pure for many years, that all the offspring of these native cows will inherit the good properties of either parent, as some of them will, no doubt, exhibit the defects which marked an inferior breed of some of the cows' numerous and varied races of ancestors. But, by careful selections and judicious crossings, there can be no doubt that, in a few years, a stock may be produced that will transmit and perpetuate their good qualities with as much certainty as any of the foreign breeds.—*December 28th*, 1846.

ESSEX AGRICULTURAL SOCIETY.

From the reports of the Committees of this Society, and the statements accompanying the same, the following extracts are made.

Ploughing with Double Teams.

Twelve teams were entered, [at the Cattle Show and Fair, at Lynn, October 1st,] nine of which engaged in the work. The land had been in grass about half a dozen years, was well swarded, and, in consequence of the extreme drought, was difficult to be operated upon. The lots were about sixteen rods long by thirty feet wide, containing about one sixth of an acre each.

All the teams were required to plough at least 7 inches deep. The average width of the furrows was a little more than twelve inches, and the average time of performance about one hour. This was a longer time than has usually been taken, in consequence of the work being much harder. All the teams performed well,—some of them very well indeed. All the ploughs used, we believe, were made by Ruggles & Co., of Worcester. Nearly all of them were in good condition. Several of them were marked Eagle No. 25. These were spoken of as the best finished, and combining the latest improvements. Attached to several of these ploughs, we noticed a *draft rod* regulated by a *dial-clevis* at the end of the beam; by the aid of which, it is said, the ploughman can readily adapt the plough to any required *width* or *depth* of furrow; and, by the combined operation of these, can so run his plough along, aside of a fence, as to turn the sod close by it; or can turn up meadow or soft land, with both cattle treading on the unbroken surface. These are decidedly useful operations. We have no fancy for the *strip, two or three feet wide*, as we have sometimes seen, left under the wall for the growth of briars and bushes. And if the plough can be made to turn it, it will save much labor with the breaking-up hoe. The mould-board of plough No. 25 is somewhat varied from that of Eagle Nos. 3 and 4, (which we have considered a near approximation to the perfection of plough-making,) so that "it takes a wider and deeper furrow without increasing the draft." The dial-clevis, as we learn from those who have used it, is thought to be a valuable appendage to the plough. We have been more particular in noticing these alterations, as we have ever considered *the bringing into use ploughs of improved construction*, and thereby introducing them to the public, *one of the principal benefits accruing from these ploughing matches.*

We have sometimes queried, whether all our ploughing could not be more advantageously done with one yoke of oxen. But in the condition in which this land was, we are satisfied that it required at least the power of two pair of cattle. It is not useful, at a ploughing match, to attempt a display of work, such as a good farmer would not approve on his own farm. What we want is, that kind of work which would be most valuable, when applied upon the same kind of land, in the ordinary process of cultivation.

The inquiry has sometimes been made, Upon what principles are the premiums awarded? It is not easy to specify any definite rules, where a combination of all the facts and circumstances should be taken into view. The man who completes his work in the *shortest time*, inquires, why the *time* is noted, if, when the work is so done, it is not to command the premium. The man who cuts his furrow true and lays it uniform, without hurrying or agitation, thinks that he has complied with the instructions of the committee, and is entitled to reward. And so he has, if the work has been done with a reasonable degree of *energy* and *activity*. In judging of ploughing, we think it proper to notice the form of the plough used; the condition of the cattle; the manner in which they work; the skill with which the plough is handled; the size and position of the furrow-slice; and, combining the considerations connected with each and all these points of view, without attaching undue importance to any one of them, to approve of that work, as best. which would be most worthy of imitation on a farm. The practised eye will readily discover many things in the movements, for which no definite directions can be given. Very much depends upon the manner in which the cattle have been disciplined, and the vigilant attention of the person holding the plough. An inexperienced hand can hardly expect to enter into successful competition.

We recommend that the premiums be awarded as follows:

To D. P. King, of Danvers,	1st premium,	$10
" E. Upton, of Salem,	2d "	8
" P. Marsh, of Danvers,	3d "	6
" J. G. Walcutt, of Danvers,	4th "	4

By order of the Committee,

I. W. Proctor.

Milch Cows and Heifers.

The Committee award the Society's premiums as follows:

To Warren Averill, of Ipswich,	1st premium,	$10
" Samuel Soule, of Lynn,	2d "	7
" James Marsh, of Danvers,	3d "	5
" Samuel Dane, of Hamilton,	4th, "	Colman's European Agriculture.

For heifers in milk, they award—

To Manning Dodge, of Ipswich,	1st premium,	$7
" Ebenezer G. Berry, of Danvers,	2d "	5

The subject is of considerable importance, and all farmers are more or less interested in it. Every man who keeps a cow is interested in it. Individual feeling is oftentimes wonderfully excited by it. The produce of a favorite cow is the subject, and, perhaps, the only subject, about which an honest man will tell the whole truth and a good deal more. It is *pretty* easy for a man to believe that his horse trots a mile in *three* minutes, if he does it in *five;* but it is a *little easier* for a man to get ten quarts of milk into an eight-quart pail. He takes his desire to have it so, for an assurance that it is so. It is a fact often confirmed, that cows for which extravagant prices have been paid, sadly depreciate in the hands of the purchasers. From sixteen quarts of milk a day, they dwindle to eight, merely by changing owners. Such things have happened in high places, where the agriculture of Massachusetts expects, and has a right to expect, better things. The owners of most of the three-minute horses have so much fondness for them, that they never put them to that speed; so, cows that give twenty quarts of milk a day are often heard of, but seldom seen.

Among cattle, there are these four general divisions—short horns, long horns, middle horns, and hornless. Each of these classes has its peculiar merits and its friends. So prejudiced, indeed, are many of the friends of one, that they can see nothing worthy of regard in any of the rest.

In New England, cattle have been divided into two classes—native and imported. Between these, the farmer has to choose. I speak of the general farmer, and not of the milkman, who selects his cows with regard to *quantity* only, careless of the quality of their milk. Of the *imported* breeds, those recommended for their qualities are the improved short horns and the Ayrshires. The *former* we have long had among us; the *latter* are but little known in the county. Which is to be preferred? "Cut your coat according to your cloth," is a very trite maxim, but it has, of late, grown somewhat out of fashion. In many parts of the county, the pastures, in summer, are short and greatly overstocked. For winter-feeding, we have an excess of mean hay, and everywhere and always a rugged climate. The prudent farmer, looking to profit rather than fancy or experiment, will undoubtedly be partial to *cows* rather than *breeds*. He will prefer a *good* cow, without a pedigree, to a *poor* cow with the whole herd-book to back her; and I think he will adopt this general rule, that small cows are more profitable than large ones, and for these reasons:—

A small cow requires less food to supply the natural waste of the body than a large one. The small Canada cow, for instance, will pick up a subsistence from pastures on which some of the larger breeds would starve. Young and growing cattle will not only *grow*, but *gain flesh*, on pastures where large cattle, although arrived at their full size, will fall away. Again, small cows give the richest milk from the same kind of food—and, sometimes, from the same weight of food, give a greater volume of milk than large ones. It is said that the small, long-haired cow of the Scottish Highlands gives a richer milk than the Ayrshire —while, in England, the small Alderney cow surpasses any other in that respect.*

Now, will native or imported stock furnish the most profitable cow? It is difficult to define what a native cow is. Youatt says, "The breeds of cattle, as they are now found in Great Britain, are almost as various as the soil of the different districts, or the fancies of the breeders." Our cattle, like ourselves, are of British origin. Careful observation will detect, in the mongrel race, traces of almost all the breeds of Great Britain. It is impossible, therefore, specifically to designate their peculiar characteristics. Probably the prevailing blood, in this county, is the North Devon or the Sussex, neighboring and kindred breeds of animals. Abused, neglected, the *meanest* of them raised, I believe only one systematic attempt has ever been made to improve them. The most indiscriminate crossing is going on at all times, and in all places. Yet the Oakes cow, the Nourse cow, the Haverhill heifer, and others,—not only native cows, but bred in our own county,—have not been and cannot be surpassed. Acclimated and suited to the soil, this native stock,—a medley of all races, however difficult to be described,—is of far too much value ever to be supplanted by foreign varieties.

The large size of the improved short-horn cow is not the only objection to be brought against her. It is a well-known fact, that the original and leading object of the breeders of this stock was to improve the carcass. They succeeded in accomplishing their object with a rapidity that astonished themselves. But what they gained in one respect, they partially lost in another. This beautiful form, increased size, and an aptitude to fatten which could not be resisted, were incompatible with good milking qualities. The latter were in fact almost destroyed. Many of the breeders were prejudiced against the stock of their neighbors, and bred in and in. This, of necessity, made the defect greater and habitual. Late in the day, they discovered their error, and some of them attempted to remedy it. Others preferred beauty of form and good qualities for the butcher, caring not whether these could or could not exist with good milking properties. I do not believe that the milk stock of the county has been benefited by crossing with them. It seems to me that the superior cows among them are the exceptions. We have gained in size, which we did not want, and which the quality and quantity of our food cannot well support; but we have not increased in value. In the ox, we have got a little more symmetry of form, but we have got, with it, a delicacy of constitution, illy adapted to the hard fare, hard climate and hard labor of New England.

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* A very striking illustration of the difference in the quality of milk given by two cows, in the same circumstances, is given by Mr. Malcolm, in his Compendium of Modern Husbandry. He kept an Alderney and a Suffolk cow; the latter the best he ever saw. During seven years, the milk and butter being kept separate, it was found, year after year, that the value of the Alderney exceeded that of the Suffolk, though the latter gave more than double the quantity of milk at a meal.—*British Husbandry*, vol. ii., p. 397.

The Ayrshires come to us with the reputation of being the best milk stock in Great Britain. Their smaller size and closer-knit frames show that they can live where the improved short-horns cannot. Time will determine whether they prove equal, in this country, to the recommendation of them in the old. "Wisdom is neither inheritance nor legacy;" therefore, try them: but if they do not prove better than our native stock, a wise course will be to "hold fast that which is good."

By the mode of keeping, I mean the general treatment of the animal. We require the cow to furnish us a calf annually, and a daily supply of milk for nearly the whole year. Now if any animal deserves better treatment than the rest, where all are so well deserving, it is the cow. All she asks, to meet our demands upon her, is suitable food, comfortable shelter, to be kept dry and clean, kind words, and kind usage. How many cows there are in the county, which never know the enjoyment of any of these, until, near the end of their miserable and half-starved existence, they are put up to fatten! How many farmers there are who give their oxen and horses the best that their barns afford, whose cows look as if they were hardly allowed the refuse of the cribs! The ox and horse are worked. They go from home, and *pride feeds them.* But the cow, it may be, has managed, on a short pasture, to give some milk and get a little flesh in summer; but the "winter of her discontent" has come. Who has not seen, in almost every town in the county—when winter was at its height, and when the fur of the buffalo could not keep out the piercing wind, as it drove the light snow far through every crevice—cows turned out to go half a mile to water, and left out half, perhaps the whole, day! It may be that they have not had a dry bed since they were taken from the pasture or the field, or nearly one half the body is soaked with urine and covered with frost. Seeking the lee of some merciful stone wall, shrinking into the smallest possible space, quivering in every limb, with half-glazed eyes, hair standing in all directions, thus doing the best they can to keep off the cold, with bones almost protruding from the skin! This is the animal which, in Holland, is thought worthy to be separated from the parlors of the wealthy only by a glass door! Men with souls look on, and heed not that they are breaking God's law, and doing violence to their own natures. Surely, the statute against cruelty to animals ought to be enforced.

I would point out some of the leading features of *good* management of cows, did I not hope, for the credit of the county, that most farmers studied and practised it. Those who do not, if humanity cannot compel them, I hope their own interests will.

T. E. Payson, *Chairman.*

Warren Averill's Statement.

I offer for your inspection my cow Flora, native breed, seven years old. Said cow calved on the fifth day of September. In the three past weeks she has made 22¾ lbs. of butter, from what milk the calf left after sucking. Average milk per day, a trifle over six quarts more than the calf sucked. The said cow calved, the last season, the twenty-first day of April. The ten months following, her milk was kept separate for butter; she made from the milk 401½ lbs. butter. After that, we sold her milk, as it was more profit than to make butter. The cow was kept the past season on hay (clover) with twenty bushels carrots; no meal. Since she calved, I have given her one quart meal per day, and a common pasture.

Ipswich, October 1st, 1846.

Samuel Soule's Statement.

The cow which I offer for premium is seven years old, and was raised by Jonathan Osborne, of Danvers. She had her last calf in March last. I bought her May 22d, 1846, and she has given milk since that time as follows :—

From	May	22d to 31st,	10 days,	168 quarts and	420 pounds.
"	June	1st to 30th,	30 "	575 "	1437½ "
"	July	1st to 31st,	31 "	501 "	1253½ "
"	Aug.	1st to 31st,	31 "	435 "	1087½ "
"	Sept.	1st to 30th,	30 "	388 "	970 "
			132 "	2066 "	5168½

Averaging 15 quarts, 1 pint and $1\frac{27}{132}$ gill per day. Her keeping has been grass and hay.

Lynn, October 1st, 1846.

James Marsh's Statement.

I offer for premium my white-face cow, which is eight years old. She calved June 3d, the calf was killed July 10th, and she has given milk as follows : The first two weeks she averaged thirty-two lbs. per day more than the calf would suck; the remaining time till he was killed, sixteen lbs. per day. From July 11th, inclusive, we have kept an account of her milk by weighing morning and night, which amounts to 2958 lbs. being an average of $36\frac{3}{41}$ lbs. per day. Her keeping has been rather a dry pasture. About the middle of July, I commenced giving her two quarts of shorts per day, which, as the feed decreased, I increased to four quarts, and have since added four quarts of Indian meal. Since August, our cows have all been fed with green corn planted for that purpose, which is their chief support in the absence of feed.

Danvers, *October* 1*st*, 1846.

Manning Dodge's Statement.

I offer for premium one three year old heifer, which is from a native cow and a Durham bull. She was calved May 31st, 1843, and brought a calf June 2d, 1846, which weighed twenty-six lbs. per quarter when thirty-four days old. She has been kept in a common pasture. When she first calved she gave sixteen quarts of milk per day. She has now fallen away to twelve quarts per day, owing to the shortness of feed.

Ipswich, *September* 30*th*, 1846.

Eben. G. Berry's Statement.

The heifer which I offer for your inspection was raised in Palermo, Waldo county, in the State of Maine, and was purchased by me, from a drove, the last season. She is three years and two months old, and weighs, at the present time, 760 lbs. Her calf was sold the last of May, at four weeks old; and the product of her milk is as follows:—

From June 1st to July 1st,	787 lbs.	8 oz.
" July 1st to Aug. 1st,	720 lbs.	
" Aug. 1st to Sept. 1st,	660 lbs.	12 oz.
" Sept. 1st to Oct. 1st,	592 lbs.	4 oz.
Total, - -	2760 lbs.	8 oz.

In order to ascertain the quality of her milk, it was set, for butter, the three first weeks in June. The result is as follows :—

From June 1st—1st week,	7 lbs. 11 oz.
2d week,	7 lbs. 9 oz.
To June 22d—3d week,	7 lbs. 12 oz.
Total, . .	23 lbs.

Her keeping, through the season, has been good pasturing, with the addition of mown grass at night, until the first of September. She was then fed with corn stalks, in common with the cows.

North Danvers, October 1st, 1846.

On Swine.

The Committee were at a loss to account for the comparatively small number of swine offered, at this and the late exhibitions of the Society, for its premiums. Essex is confessedly not a grazing county, and hence it is that few cattle are fatted for the shambles, and few such present themselves at our shows. But of swine a large amount is fatted and raised among us. There is hardly any neighborhood in our villages but could present many such as would do credit to any exhibition. Our premiums seem to be offered rather with a view to encourage the breeding of swine, than the fattening of them; but to that object, as your Committee believe, the attention of our farmers is not at present specially directed. Many of them purchase their store pigs from the droves; some have no belief in the superiority of one breed over another; and others are deterred from keeping sows for breeding, by the risk and uncertainty attending it. Perhaps, too, from the low price of pork for the last few years, less interest is taken in procuring valuable breeds of swine, and propagating from them, than would otherwise be.

Your Committee would be slow to subscribe to the opinion that it is best to purchase from a drove where a large number of swine is kept. The most practised eye is often deceived as to the appearance of swine, and the first cost of those selected might often, with the best of feed, be hardly doubled in six months. We believe there is a great difference in the breeds of swine; that some lay on fat as fast again as others, with the same feeding. Some seem to have no other ambition than to increase in weight, and to rejoice the heart of the farmer; whilst others seem determined to baulk his efforts and hopes, by either eating with a dainty appetite, or, if devouring food with a seeming relish, making no good use of it after it has passed from the stomach, except to increase the contents of the hog-pen.

With regard to breeds,—the Berkshire, which but a few years since put forth the loftiest pretensions to public favor, is now generally condemned by those who have kept and slaughtered them. In England, where swine meat is used more as other meat is than with us, and where it is consequently desirable to have a considerable portion of it lean, the Berkshires are held in high repute. A Yankee, however, looks first and foremost to a hog for pork, as a relish and as fat. But for furnishing this, the Berkshire breed of swine is among the very worst that exists. The fat pork of an entire Berkshire hog that weighs 350 or 400 lbs., is about two inches in thickness, and about a half an inch of that is rind. It is very soft, and does not cool hard like good pork. The legs and shoulders are very weighty, as are also the spare-ribs and loins.

Your Committee are not sufficiently acquainted with the different varieties of swine to distinguish them by their names and qualities, so as to give a preference to any particular breed. It is, indeed, difficult to know what to call the best breed, as they are so crossed and intermixed, as they are to be seen among us. In selecting swine, we should not take a pig with a large head, large ears, large legs and a large tail; but if we wanted a pig of which to make a hog, we should endeavor to procure one that had a short head and small ears, fine legs, and a slim tail set upon a slope rump. We should then have pork and not bones. At slaughtering, the latter pig, which to appearance would weigh 300 lbs., will be found to weigh 350 lbs. or more; the former will apparently weigh 400 lbs., but, when brought to the balance, he will be found wanting.

There is unquestionably greater risk attending the breeding of swine than any other farm stock. But there are some rules, which, though perhaps generally known, if more rigidly observed, would diminish the chances of a loss of pigs at littering. The sow should be placed by herself in a pen, sparingly supplied with fine litter, some weeks before confinement, so that she may become accustomed to her abode. On the eve of that event she should not be disturbed, nor indeed until after she has begun to suckle all of her new-born family. She should be fed lightly for some days after having littered, to allay inflammation and to promote a healthy tone of body and appetite. The quantity and quality of food may be increased, as the demands of her stomach, which will soon be great, increase. But should her appetite be poor—should she be moping or enfeebled by littering, let her out of her pen with her young ones, to follow her own bent; to walk, or root, or lie down, when and where she pleases; only housing her at night.

In a fortnight from their birth, pigs will thrive all the better for being allowed to run out, at liberty, from the pen, and, as soon as they may, to eat grass, crumbs, and such other food as they can find. In a few weeks more, they will readily eat corn, which should be furnished them in small quantities as soon as they will eat it. They thus learn early the art of eating, and depend partly on it, as well as on sucking, for support. The change, therefore, on weaning, is not a violent, but an easy one. They are thus preserved from that weakening and often fatal malady of young weaned pigs, the scours. This and the mange are, perhaps, the most frequent and obstinate diseases to which weaned pigs are liable. For the former, we know of no remedy but the largest liberty and the smallest allowance of food: for the latter, washing the pigs with butter-milk, or a sprinkling of lamp-oil on their backs, will be found to be very beneficial in removing the distemper.

In feeding swine, care in providing their food, regularity in furnishing it, and judgment as to the amount furnished at particular times, are all important. A hog, it is said, will eat any kind of food, if he be kept short enough. Perhaps he will. And yet the object of the feeder should be, not to see how mean or filthy fare a hog will put up with without grumbling, but what food he will consume the most of, from day to day, which will best promote his growth and at the same time be cheapest provided. And here is a wider field, and one containing more disputed landmarks, than we can fully enter upon or settle. By some it is contended that raw food, of every description, is better than cooked; others, and they comprise the larger class, say that solid food for swine is more nutritious for being cooked. Our own testimony would go strongly in favor of cooked food, and some of us are of opinion that, if it be fermented, it is all the better. Indeed, apples, sour or sweet, if boiled and mixed with meal, are not only eagerly eaten by swine, but are nearly as promotive of their growth as potatoes boiled and mashed with meal. We have no question that it is the best use to which cider apples can be appropriated. Some think that the wash of a dairy is almost indispensable to the raising of pork; and doubtless it is an important item in lessening the expense of it: while others assert that hogs will take on flesh fastest when fed solely on corn and cold water.

But if these and other points, as to the kinds of food best adapted to the fattening of swine, are disputed, all are agreed that regularity in furnishing the food is of the utmost consequence. A hog will tell the hour of the day, by his stomach, with great exactness.—If it be feeding time and his wants be unsupplied, he will squeal, and fret, (who can blame him?) and worry off flesh faster than it can be put on by a flush of food at irregular hours. Swine should, therefore, as a general thing, be taken care of by one and the same person. If they be entrusted to a number of hands, the old adage, "What is every body's business is nobody's," will be too often verified, in their attendance. With three meals a day in summer, and two in winter, we believe our swine are very well content.

Judgment should be exercised in feeding; for this, some head-work as well as hand-work is needed. If the previous meal, or a portion of it, be left in the trough, it is evident either that the swine have been over-fed, or have lost their appetite. In either case, diminish or withhold entirely their food at the next regular meal-time, and perhaps the next, and the next, until the quantity furnished at any one time be completely consumed. A clean trough is a great restorative for a lost appetite. A hog can eat without a table-cloth, but he likes a clean plate,—or, what is the same thing to him, a clean trough,—as well as he who feeds him. Swine should not be surfeited, if you would have them eat with a keen appetite. Gorge them to-day, and to-morrow they are shy and dainty feeders. The operation of fattening is a gradual one, but it is also the quickest and cheapest performed when the fullest amount of material needful to it is furnished. If it be true, as some physiologists assert, that plants live mainly on air, it is very certain that swine cannot thrive on any such food. They need good food and a plenty of it. They cannot be cheated out of it, either by avarice or philosophy, without being cheated yourself.

In reference to the often-disputed question whether pork-raising is a profitable part of our farm pursuits, much, of course, depends on the relative price of pork and of the food necessary to make it. At the present price of corn and pork, it is contended by some that all the profit, in keeping hogs, is in the manure made by them. This may be true if all the food is to be bought for them, but there is a large amount of valuable materials on almost every farm, such as skim-milk, small potatoes, wind-fall and other unsalable apples, unsound and small ears of corn, which, we believe, can be applied in no way more profitably than in the feeding of swine. And as many such articles go to make a given amount of pork, it is difficult to arrive at the exact cost of fattening it. But if you have to buy all the food for your swine, corn is probably the most profitable; and it is believed by your Committee, that pork can be raised for six cents a pound on corn when it is sixty cents per bushel, at seven cents a pound when it is seventy cents per bushel, and so on, either way, one cent a pound on the pork, and ten cents a bushel on the corn. And this conclusion is drawn from the fact that a good thrifty hog that will eat four quarts of corn a day, will gain a pound and a half of pork a day.

To promote the growth of swine, they should be well littered, so as to have a clean bed, and their pen should be kept dry, though not too close. In winter, it is more difficult to make them grow than in mild weather, and one cause of this, as your Committee believe, is, that they are then often kept too warm in their pens, so that, on going out, their perspiration is checked, and their health consequently injured. Whether hogs are fatted in summer or winter, let the eye of watchfulness be always upon them, and the liberal hand extended to supply their wants at regular hours, and then—if at all—the business will be made a remunerating one.

ALLEN W. DODGE, *Chairman.*

Meadow and Swamp Lands.

The fact being now well established, that peat meadows, after having been reclaimed, are among the most valuable and productive of cultivated ground, the question arises, What, from past experience, is the best method to be pursued in reclaiming such land? On many tracts of peat meadow, which are free from bushes and trees, the expense of inverting the sod may be entirely saved. From the experience of one of the committee, at least, the most economical course to be pursued, and that which gives the greatest return for the outlay, is, after draining by marginal and other ditches, to haul on, in the winter, (if the meadow be soft,) about one hundred and fifty loads of gravel to the acre; spread in July following; and, early in September, after having put on some compost or ashes, seed down to grass. Meadows reclaimed in this way have continued to produce good crops longer, without top-dressing, than similar land which had been planted till the turf was subdued, and then sown down without any admixture of sand or gravel. The inquiry is sometimes made, Of what benefit can mere sand or gravel be to such land? It is well known that meadows which are submerged during a great portion of the year contain acids which are deleterious to cultivated plants. In order to induce fertility, such acid must be corrected. It is said by chemists that every hundred lbs. of granite contains six or seven lbs. of potash; this alkali is abstracted by the peat from gravel, when applied to such land,

and the peat becomes a bed of manure. It is necessary also to warm and consolidate the meadow, and to afford silex for the coating, and thereby give support to the growing plant. Hence the great value of a certain amount of coarse gravel in the process of reclaiming peat meadows.

Early in July, the attention of the committee was called by James Marsh, of Danvers, to one acre of reclaimed meadow land, for premium. The committee inspected the meadow while the crop of grass was standing, which, in their estimation, would produce two and a half tons of hay. The crop of hay, the year previous, amounted to three tons. They award to him the first premium of fifteen dollars.

In September, the committee, at the request of Samuel C. Pitman, of Lynn, viewed a piece of land on his farm, containing about ten acres, which he has improved by clearing the bushes, trees and stumps, and rendered productive of good crops, as will be seen by his statement, which is herewith transmitted. The ground appeared to be more of the character of upland than otherwise, and it was thought that the improvement did not come within the province of a committee on wet meadow and swamp land. The method of extracting stumps, adopted by Mr. Pitman, seems to be worthy of attention.

The Committee have received an interesting communication from the Rev. Edwin M. Stone, of Beverly, on the subject of reclaiming meadow and swamp lands, which the Committee request may accompany their report.

For the Committee,

J. NEWHALL.

James Marsh's Statement.

The piece of reclaimed meadow, to which I ask the attention of the Committee, contains about four acres. A few years since, it was considered worthless, not having been mowed for many years, and then but a small part, for litter. About half was covered with bushes and stunted maples. About six years since, I commenced reclaiming, by inverting about six rods and spreading a light dressing of compost manure, and sowed grass seed about the last of May : this exceeded my most sanguine expectations, both in the quantity and quality of the hay to the present time. The next year, I ploughed half an acre of the hardest part, by attaching a plough to a pair of wheels, so that the oxen might walk on the sward. This I planted with potatoes: and, after they were dug, the ground was levelled and prepared for grass, which was sown on the snow in March. The piece of land to which I would ask your attention contains one acre. In the winter of 1839, I cleared the wood and bushes, and have since kept the sprouts down by mowing. In August, 1843, I hired it, dug over and laid level, (the stumps and hassocks thrown back) for twenty dollars. Such of the roots and hassocks as became dry, I burned; the others were carted home for fuel, when the meadow became frozen. The fuel paid for this part of the labor. I then covered it with a loamy gravel one inch, which took one hundred and fifty loads; which took five days' labor of two men and two yokes of oxen. The work was done in winter, when there was two feet of snow on the ground,—too deep for other labor. I then applied a light dressing of manure, and sowed the grass-seed April 15. The crop was cut, the first year, about the last of August, and yielded one and a half tons, worth $15 per ton; the second year, three tons of prime quality, worth $20 per ton: the present season, two and a half tons, worth $15 per ton. The expenses, as near as I can estimate, are as follows :

Turning, ...	$20 00
Gravelling, ...	10 00
Manure, ...	10 00
Grass-seed—one peck herds, one bushel red top,	1 50
	41 50
Crops—First year, 1½ tons, at $15, . .	22 50
Second " 3 " 20, . .	60 00
Third " 2½ " 15, . .	37 50
	120 00
Deduct for cutting and making, $2 per ton,	14 00
	$106 00

I have been improving my low grounds for fifteen years, and have more than quadrupled my crop of English hay. I know of no labor that yields a more certain return. I think (where the ground is not too rough), inverting the sod and spreading a light coat of gravel, manuring and seeding down to grass, yield much the greatest profit for the labor.

Danvers, October 1, 1846.

Edwin M. Stone's Letter.

At what time attention was first drawn to the *reclaiming of meadow and swamp land* in Essex County, I am without means of determining; but it is now something more than forty years since the late Benj. T. Reed, Esq., of Marblehead, tested the utility of reclaiming wet lands by ditching, covering with gravel, &c. He owned four or five acres of this kind of land, that produced grass of so poor quality as to be hardly worth mowing. This same land, after being drained and suitably prepared, yielded from three to four tons of good hay per acre. Mr. Reed's experiment attracted attention, and doubtless was instrumental in promoting similar improvements elsewhere. Many years ago, the late Peter Dodge, of Wenham, reclaimed a piece of meadow land with a success that won the admiration of his neighbors, and that induced others to engage in "*Peterizing*" their bogs, as the process was familiarly denominated. Since then, the practice has been extensively adopted.

This work has not, however, been pursued to the degree its importance warrants. There are still, in this county, thousands of acres of meadow and swamp land in their primitive state. This land, now comparatively worthless, would, if reclaimed, be highly valuable. I have in my mind, at this moment, a tract, for which the owner would not now accept one hundred dollars per acre, that a few years ago was worth not more than fifteen dollars. I believe no land remunerates labor so well. An occasional dressing of gravel or sand, to keep down the foul grasses, and a thin coating of manure once in three years, will, in common seasons, ensure an abundant crop of English hay.

While the value of such land, when reclaimed, is acknowledged by all, some farmers object to the improvement on the ground of expense. They say that the labor of reclamation costs so much, that they feel compelled to sacrifice their preferences at the shrine of prudence. But this objection loses its weight, when it is considered that farmers may do most of this work within themselves, and at times when their teams are not required for other service. Besides, much of the swamp land in this county has been, at a remote period, covered with a heavy growth of pine, and the fuel raised from beneath the surface will, in most instances, remunerate the expense incurred. Such has been the fact in several cases in my own neighborhood. My neighbor, Sullivan Brown, who has this year raised a fine crop of corn and potatoes on land that two years ago was mere bog, informs me that the entire cost of reclaiming it has been defrayed by the wood obtained.

Another consideration, by which I would urge this kind of improvement, is *Health*. If "time is money," so is health. The salubrity or insalubrity of a neighborhood or town will always affect the value of landed property. Whatever, therefore, renders a place more healthy, makes it more attractive for habitation, and consequently increases the value of real estate. This fact is worthy the attention of all, and especially of those inhabiting towns through which pass the *iron arteries* centering in Boston. The rapid growth of the metropolis is every year impelling hundreds of its business men to seek homes for their families, during the summer months, in the country, and such will continue to be the case for many years to come. The facilities of rail-roads make it nearly as convenient for a merchant doing business on Long Wharf to reside twenty or thirty miles in the country, as to live at the south or west ends of the city; and, in selecting a residence, its healthiness will determine the choice.

Much of the summer sickness in the country is attributable to an impure atmosphere produced by the miasma of meadows and swamps. Draining and culture will, of course, in all such cases, remove this cause of disease. This truth has been remarkably exemplified in the north parish in Beverly. Formerly, fevers, and other forms of summer and autumnal disease, prevailed extensively every season. About twenty years ago the reclaiming of meadows and swamps was commenced, and, up to the present time, between thirty and forty acres have been converted into productive land. The effect has been wonderful. During ten years past, not a case of malignant fever has *originated* in those neighborhoods, formerly so sickly; and the parish has become one of the most healthy places in the State. Last year, but four deaths occurred in a population of about seven hundred—three infants, and one adult aged 86 years. Indeed, there is not a spot in the Commonwealth that I can now more confidently recommend for a residence, on the score of salubrity. What has been effected *here*, may be effected elsewhere, by similar process; and I respectfully submit to landowners in sickly neighborhoods, whether the work is not, in every point of view, worthy of more general prosecution.

Last year, in a report by the Society's Committee on Meadow and Swamp Land, a scientific and practical survey of the meadows of the county was recommended. Such a survey, thoroughly executed, would be highly advantageous to the farming interest, and reflect deserved credit on the Society.

Beverly, September 30th, 1846.

Samuel C. Pitman's Statement.

The swamp to which I have called your attention is composed in part of muck and part of sandy clay soil, and contains ten acres and twelve rods. In the year 1839, the first year I came to live on the farm,—and, by the way, the first year of turning my attention to farming,—this land was so thickly covered with brush, brake and briars, that it was with great difficulty a man could walk through it. A few years previous to this, it contained a heavy growth of hard wood. In August, 1840, I had the brush and brake cut and burned. In June, 1841, I commenced pulling the stumps, which averaged, large and small, five hundred to the acre. One hired man, with myself and one yoke of oxen, cleared about three acres in twenty days. The last part of summer and fall, I cleared, ditched and ploughed, the remainder. I would here state that I made use of a strong purchase—consisting of tackle and fall, to remove the stumps. I supposed my purchase, with one yoke of oxen, would move one hundred tons. The expense of pulling the stumps, reckoning my own time at one dollar per day, and the oxen at fifty cents per day, I estimate to have been $175. In 1842, I planted about one half the land with corn and potatoes, and had a very fair crop of each. The other part, or half, was so full of brake-root, that I could not work it; in order to get rid of which, I let the land lay until after haying, when I gathered the brake-root into large heaps and burned them. In 1843, ploughed and planted part with potatoes, and sowed part with barley. In 1844, ploughed and sowed part with oats, which I cut for fodder. The other part I planted with potatoes. After getting off the oats in August, ploughed and sowed, with herds grass and red top, about six acres. In 1845, ploughed and sowed with oats three acres; planted one acre with potatoes, six acres being in grass; all, this year, bearing heavy crops. In August, ploughed and sowed with herds grass and red top the three acres which were in oats. The present year, 1846, ploughed and sowed with barley and grass seed one acre in April; cut, in July, a heavy crop of barley. From the nine acres in grass, I think I can safely estimate an average of two tons good hay per acre. I have used very little manure on any part of it, and some parts nothing more than a light sprinkling of ashes when seeded down to grass.

The expense attending the whole improvement, over the usual labor on common tillage lands, I estimate thus:

Cutting down brush, ...	$45
Pulling stumps, ...	175
Hauling off do., ...	35
Extra team and labor ploughing, . .	40
Expense of apparatus for pulling stumps,	30
	$325

The amount of fuel obtained from the stumps, I calculate, was worth to me all the expense of pulling them out, which, deduct 175 from 325, leaves 150, or $15 per acre. I certainly think the crop of hay last year more than balanced the account between me and the swamp.

I will cheerfully explain the method I used, in pulling the stumps, to any one wishing to try the experiment.

Woodside Farm, Lynn, Sept. 14, 1846.

ON TURNING IN CROPS AS A MANURE.

A gentleman in this county has, for a period of fifteen or twenty years, nearly every season turned in crops upon fields of different sizes and different soils, mostly, however, of a loose and sandy character, and with a result which encourages him still to continue the practice. For about ten years, he kept his garden, containing a quarter of an acre, by this method, in a rich and productive state, with the addition of about a cord and a half of manure yearly. He had the weeds covered over at hoeing when this could be done; but when this was inconvenient, they were carried, with the small trimmings of the trees, grape and other vines, the foliage of vegetables and other things of like character, to a place devoted to that use, put into a pile and earth thrown over them, where they were suffered to remain till they were suitable for use, which was after the harvest in autumn, or the ensuing spring. During this period, two crops were taken from most of the garden; and, what most gardeners will know how to appreciate, the soil, while it grew more productive, still retained in degree the freshness of virgin earth, and gave to the vegetables that peculiar freshness and lively taste admired by all, but not always attainable from lands long cultivated.

He has also brought a field of one acre or more into a productive state, almost exclusively by ploughing in crops, which, when he commenced, was about as thoroughly exhausted by continual cropping, as one can well conceive. The method pursued has been to cultivate two crops—one to be taken off, the other covered in. Rye, oats and buckwheat have been the grains mostly used. One part of the field is now improved as a nursery, and lately the other has been filled out with peach and plum trees, designed for an orchard. These are in a flourishing condition. On the orchard part, corn was planted this year, with no other manure than a very small quantity put into the hill. From the appearance of the stalks and the setting of the ears, a good judge of such things thought there would be a yield of from forty to fifty bushels to the acre, and though, from the dryness of the season, the ears did not fill out entirely, there was still what should be regarded as an encouraging harvest. Less than half the manure has been used, in producing the change, than would have been necessary had no other compensating process been adopted.

From various statements, and from our own observation, we are of the opinion that the laws of the natural world will be best met, and, in consequence, the most encouraging results follow, by confining the green-crop operation to land comparatively of a sandy and loose soil, and leave the clayey and stiff soils to the enriching and softening influence of the product of the stables and yards where the flocks are folded. Many reasons present themselves to confirm us in this belief. We shall mention only two, and leave those without enlarging upon them. The first is, that vegetables will ferment much more readily and powerfully, in sandy and loose soils, than in those of a stiff character, and therefore produce greater chemical changes, and, in consequence, prepare a greater portion of nourishment for the crop that may come after. The second is, they will thus bring into more active operation the electrical fluid, a most powerful agent in carrying forward vegetable growth. And, it may be added, both of these objects will be more fully accomplished if a very light covering is drawn over the embedded crop, than if it be buried deep in the earth. The field referred to above has been cultivated almost exclusively with a plough drawn by one horse.

There seems to be a difference in the opinions of those who have written, and perhaps of those who have made personal trial, of this method of cultivation, whether it is best to cover the crop when green, or suffer it to remain till ripe, and, after it has become dry, then to turn the furrow upon it. It is the opinion of your Committee, that neither should be adopted as a universal practice. On sandy and dry lands, we must think that the crops turned in when green will work the greatest benefit. On clay and stiff lands, the dry may do as well; the season of the year, when the work is done, to justify a little variety. In the midst of summer, the crop should be used when green; late in the fall, it may do as well when it is dry. There is one serious objection, which will often operate against working the crop when matured and dry; in most instances, the year will be consumed by the process; while, with the other practice, a crop can be raised the same season, to be gathered into the storehouse or barn.

In order to account, in a manner at all satisfactory, for all the phenomena connected with this subject, the Committee feel obliged to resort to the opinion that there is, in living plants, what may be called a self-providing power—a vegetable, or, if the term be better liked, a chemical potency, by which, in their urgency, they can transform materials, not before calculated to give them nourishment or support, into food suitable for them to feed upon; that they can gather for themselves manna in a vegetable wilderness, and draw their water from the flinty rock. The manner in which plants, under the most unpromising circumstances, do live and thrive, is often highly interesting, often truly astonishing, and, upon any other principle than that just mentioned, not easy to be accounted for. To this principle, too, may we not safely refer many of those great changes which have often taken place during a long process of cultivation, each successive year producing some changes, which, being carried forward by the successive crops, at length have resulted in a most entire and important alteration, in consequence of which vegetables and fruits grow with luxuriance, where formerly the greatest labor and attention were required to secure to them even a sickly existence?

Plants do more than simply provide for themselves; they act, as it were, prospectively, lay up nourishment for those that may come after them. Having seed in themselves, they put up in store for those that are likely to proceed from them. If one crop has been faithfully returned to the earth whence it grew up, the next will come into existence with an increased means of food suited to its nourishment. And because there is much which is common in the elements on which vegetables subsist, should seed of a different kind from that of the preceding year be used, the coming plant would enter upon the harvest already gathered to its hand, and enjoy the means of a more vigorous growth, because served with the stores gathered by a former generation. Even upon the supposition credited, we believe, by most, that a single ingredient necessary to the best development of a particular place may be used up by its long-repeated production, it does not certainly follow that the general means of vegetable life may not, at the same time, have been accumulating. Were there no other means, then, of increasing the productive power of a given soil, than a constant tillage and a restoration in such forms as could best be done of what had been taken from it, no one need doubt but that, by a careful and scientific cultivation, a wilderness might be turned into a fruitful field.

Notwithstanding a very general belief of the advantage to be gained by the kind of culture under consideration, and also the evident support which the general laws of the material universe give to it, the Committee are sensibly struck with the fact, that the method has been tried but by comparatively few in the county. The same observation may be extended to the Commonwealth, and, indeed, to the nation at large, and that, even of those who have once or twice tried it, and reported favorably as to the result, almost none have repeated the experiment, certainly have not introduced it into their settled modes of farming. That land may be thus enriched, and at a moderate expense, is credited by many, but their faith has not become strong and controlling enough, nor operative enough, to produce much action. The truth needs still to be held up, the subject presented in a more brightening form, the convictions to be made deeper, the benefits more tangible. It is a subject of great and general interest. Its principles apply with equal adaptation to the smallest garden and the largest farm. Its utility is founded in the general and unchanging laws of the material and vegetable universe. In many places it opens almost the only hope that large portions of the earth, and, what is more immediately the concern of the Society, large portions of this county, now unsightly because unproductive, will soon, if ever, be clothed with verdure, and present to the eyes of a grateful and enlightened community, a harvest sufficiently full to take away hunger and want even from the poor.

As it respects the expense of this mode of cultivation, every one can calculate the amount with sufficient accuracy for all practical purposes. The expense of the seed used, and the expense of sowing and ploughing, is the whole. Your Committee, however, think that the expense of ploughing should not be reckoned in, as it is most certain that there is not hardly a field in the whole county that would not, by an increased yield, more than pay for an additional ploughing, without any reference to a green crop to be turned in.

In the choice of the kind of grain to be used in this mode of culture, there seems to be but little choice. That kind which, from the character of the soil or season of the year, is likely to yield the greatest amount of vegetable material, should be taken. Buckwheat seems to have been the kind more generally used, and perhaps with good reason. Col. Benson, of Bradford, succeeded well with English or white mustard. His lot is of a clayey character.

Too high an estimate cannot be put upon the investigations of science, especially those of chemistry, as a means of helping forward the agricultural interest of the community, yet it cannot be denied that there is many times a discrepancy between the theories which science has formed, and the results of experiments made in conformity with them. This fact should not, however, disparage the importance of such scientific investigations. Demonstration enough has been given of their utility. The only inference that should be drawn from the fact, is, that, to whatever extent investigations have been pushed, there still remains a wide and rich field which has not yet been travelled over—much land in the world of knowledge untaken. We may be permitted to add, that the discrepancy referred to calls, in a special manner, to deeper investigation of the physiology of plants, and more especially to the assimilating and changing operations wrought upon surrounding materials by the wonderful powers with which *life* and *growth* appear to have endued them.

GARDNER B. PERRY, *Chairman.*

ON THE USES OF SALT IN CULTIVATION.

At the present day, many are turning their attention to the use of this article as a fertilizer, as well as a top-dressing in orchards for the destruction of insects. We commenced our experiments upon the use of salt and saline substances in 1828, particularly with the plum-tree, and have been successful, not only in having good crops of fruit from that time to the present, but also rendering (in connection with clay) our soil—which was naturally of a light and sandy loam, subject to drought—one of a more retentive and prolific nature. We have also used brine upon the gooseberry and current bushes, for the destruction of insects, with decided benefit, by dissolving salt in water in the proportion of one pound to about four gallons. We, however, proportion this mixture according to the state of the plant; thus, for the gooseberry, we applied, early in spring, before the shoots or leaves were at all developed, a decoction so strong as to whiten the branches, without any perceptible injury to the fruit; but if deferred until the growth commences, we use it much weaker.

On the effect of sea-sand we have had some experience, having, in the fall of 1841, drawn from the shore eight to ten horse-cart loads, and placed them upon a quarter of an acre of light, sandy loam; it was then spread over the surface and ploughed in. The spring following, (April 13th) we sowed half a bushel of peach-seed (the stones being first cracked) in drills. These came up well, and, upon the first week in September following, we budded several hundreds of the trees. These averaged larger than any seedlings we had previously seen; many of them measured an inch through at the butt, and this season we have taken fruit from the unbudded ones, consisting of seventy-five varieties.

In applying the salt to the land, we prefer the winter or towards the spring, but always *previous to the swelling of the buds.* Our method is, to spread it upon the surface, where it remains until the ground is in a proper state to work; it is then dug or ploughed in.

We have, the past season of 1846, used rock-weed taken wet from the ocean, in planting potatoes, placing the weed in drills about three feet distant, and planting a set at each end of the weed, covering all about four inches deep with soil; the crop was good, entirely free from the rot or wire-worm.

I. M. IVES.

Salem, November 23, 1846.

Grain Crops.

The Committee, F. Howes, chairman, reported that C. H. Holmes, of Topsfield, was the only claimant for the premium of the society for the best-conducted experiment in cultivating beans. They did not, on the whole, think that he was entitled to the premium; but recommended that, for his experiments in the cultivation of this article, and the account of them in his statement, a gratuity of five dollars be awarded to him.

C. H. Holmes's Statement.

It is singular that the cultivation of the bean is not more extensive among Yankee farmers, who generally have an eye to their own interest, for certainly there is no crop raised, (except in the neighborhood of a market) which yields so great a profit; —as the bean is adapted to every soil, yielding from fifteen to twenty-five and sometimes forty bushels per acre, and requiring a small outlay of manure and labor to its production. The small pea bean has my preference to all others, because it produces more to the acre, is not so liable to be fractured in threshing, and, last but not least, is worth twelve per cent. more in the market. On light lands, the bean acquires its peculiar name of *bush bean*, having all its stems high and dry from the ground, and yielding a finer produce than on any other soil. On more fertile and heavy soils, it covers the whole ground with its luxuriant vines, producing a large crop of beans and straw, the latter being worth about two thirds the price of English hay, for stock of any kind. In preparing the ground for seed, it should be either fall-fallowed or cultivated one year previously, and, after repeated ploughings, four cords of muck composted with one half barn manure, or, what is better, one sixth privy manure, harrowed in, is sufficient for one acre. It should then be drilled three feet apart, and the beans planted four inches apart in the drills. Two hoeings, accompanied by the cultivator, are sufficient. At harvest, the beans are pulled and stacked, by placing a stake firmly in the ground, around which are thrown stones sufficient to lay them on, which should be done with the roots to the stake: or, two stakes may be firmly set in the ground, and withed a foot therefrom, on which the beans are placed and bound firmly at the top, and thus the beans may remain for weeks, impervious to rains.

Last year, I raised, from about five acres of heavy land, manured with four cords of muck compost or four cart-loads of peat ashes per acre, one hundred bushels of beans and four tons of straw. This year, I planted eight acres of light land fall-fallowed, manured in the hill with privy compost, seeded with from three to five beans per hill. They grew with great luxuriance, producing from one hundred and twenty-five to two hundred pods per hill, two on one stem. I counted two hundred formed, and forty-four unformed pods, with from five to seven beans each, or about twelve hundred for one. In August, owing to the unequal temperature of the weather, they were struck with a *mildew or rust*, and, instead of one hundred and fifty bushels, I raised only fifty-seven bushels. Another piece of heavy land, which I planted in drills, with corn in hills, shared the same fate, producing only eight bushels. My whole crop amounts to sixty-five bushels of good beans, worth, and engaged at, two dollars per bushel. At the last hoeing of the piece, I sowed grass seed in the intervals, which looks finely.

From several years' experience in raising beans, I gather these facts: That land for beans should be fall-fallowed or planted with some other crop previously; that the manure should be broad-cast, the land planted in drills with intervals of three feet, the stalks four inches apart in drills, and the beans pulled and stacked before fully ripe, as first mentioned.

The whole cost of raising the crop this year on the eight acres, was as follows:

Ploughing,		$21
Manure and muck, and preparing the same,		25
Planting,		26
Hoeing and cultivating,		25
Pulling and threshing,		12
Seed,		6
		$115
Product—57 bushels of beans, at $2,	$114	
2 tons of straw at 8,	16	
	$130	

Topsfield, September 30th, 1846.

Fruit Trees.

No pear trees were exhibited to your Committee for premium. In all the nurseries visited, the young seedling pears had evidently suffered from the effects of the preceding winter, and nearly all of them, as is almost uniformly the case with young seedling pears, from the middle of August to the middle of September, had dropped the quarter part of their leaves. The cause of this disease, for such it must be, appears unknown; whatever it may be, it is a serious evil, injuring the growth of the tree and diminishing its thriftiness, and, besides, as the bark will not readily peel on a tree thus deprived of its leaves, frequently rendering it necessary to bud them at too early a period of the season. The discovery of the cause of this disease in pear trees, and thus perhaps leading to the discovery of its cure or prevention, is a subject worthy of the careful attention and inquiry of those engaged in their cultivation.

Taking into view all the circumstances, the species of trees offered for premium, their growth, vigor and general appearance, as well as the number of specimens, the quality of the soils, and the cultivation of the several nurseries examined, the Committee award

To Ephraim Woods, of Salem,	the 1st	premium	of $10
To Wm. G. Lake, of Topsfield,	the 2d	"	8
To James B. Cole, of Beverly,	the 3d	"	Washington's Letters on Agriculture.

For the Committee,

JOSEPH S. CABOT.

Fruits.

The exhibition of fruits this year has exceeded, in variety and interest, any previous one held by the Society, and the specimens presented were generally fine and well grown.

From the endless variety of fruits now presented in the catalogues, the difficulty seems to be in the selection of a limited number for a small garden. The nurseryman finds his profit in multiplying varieties, and it is the ambition of the amateur who cultivates extensively, to swell his list of fruits, by the addition of every thing which is new; but the small grower requires those kinds only which, by their good bearing qualities and thrifty habits, are likely to repay him for the labor and care bestowed in their cultivation: he should therefore endeavor to select such good kinds as are suitable for his locality and soil. It is well known that some varieties flourish in a strong loam, others in a light and sandy soil, while a few, like the Bartlett pear and the Baldwin apple, seem at home in every variety of soil and exposure: hence the conflicting opinions of good cultivators. each giving the correct results of his own experience.

Many kinds which take a high rank in the catalogues, and which can be recommended for a large collection, are not desirable for a small one, owing to their unthrifty or unproductive habits, or variable character; while there are others, not strictly first-rate in quality, yet so uniformly productive and healthy, that they are not to be neglected in a collection however small.

For the Committee,

OTIS JOHNSON.

MIDDLESEX AGRICULTURAL SOCIETY.

In the return of the doings of the Society of Middlesex Husbandmen and Manufacturers, its Secretary, Abiel Heywood, of Concord, states, "That the Society on the 7th of October last, held its Annual Exhibition and Cattle Show at Concord. The large crowd of farmers present from all parts of the county, and the number, variety and beauty of the articles and products brought for exhibition and premium, showed the deep interest felt in the Society and its objects. There were more than twenty entries for the ploughing match, and it was well contested, though the previous drought had baked the earth so hard that the furrows were turned with great difficulty. The other departments of the exhibition were unusually full, and evidenced a high state of skill, industry and productiveness in the county, especially in that of fruits.

One of the most interesting features of the exhibition, was that of the stock imported by the Massachusetts Society for Promoting Agriculture. They attracted much attention, and showed the wisdom of that Society in their purchase, as, from the interest manifested in them, there can be no doubt of their being employed, to a large extent, in improving the breed of cattle throughout the county.

The Address was delivered by the Hon. John G. Palfrey.

ON FARMS, &c.

In prosecuting their examination of Farms, the Committee observed, with high satisfaction, the manifestations of the spirit of improvement, in every town to which they were called. Their attention was frequently attracted, as they passed from place to place, by many neat and spacious dwellings,—by new and well-filled barns,—by plantations of thrifty trees, luxuriantly laden with fruit,—by extensive fields of corn,—and by numerous reclaimed meadows. The contrast between the present appearance of these meadows and that which they exhibited a few years ago, must strike with admiration every beholder who has an eye susceptible of the attractions of beauty, and a mind capable of estimating the worth of useful improvement.

Some of the meadows which were entered for a premium have been, within the knowledge of some of the members of the committee, mere swamps and quagmires, in which frogs, serpents, and turtles, had held a life estate from generation to generation. The only vegetable productions were alders and ferns, interspersed with bogs, and decorated here and there with a few cat-tails, on which a bob-o-link might be tempted to alight to enjoy a moment's interval of silence. From these same swamps, also, were wont to issue hordes of gnats and mosquitoes, like the Goths and Vandals of a former age, to war upon civilized humanity. Those once unsightly swamps are now covered with grass, and afford exuberant crops of hay, for the support of domestic animals. Although the Committee would be sorry to give occasion for a suspicion that they are deficient in the milk of human kindness, and they flatter themselves that they have as natural an aversion to war as the most enthusiastic members of the Peace Society, yet they cannot refrain from expressing their approbation of the industry and skill which had enabled the proprietors of these swamps to extirpate the aboriginal tribes of reptiles and insects, which, for aught we know to the contrary, had held undisputed possession thereof, from the day when Noah, with his family of creeping and flying things, emerged from the Ark. The Committee profess to be strict conservatives in principle, and have great regard for "vested rights;" yet they witnessed, with unmingled delight, certain demonstrations of radicalism, in the uprooting of thorns and brambles, and an apparent determination to eradicate the dogwood and ivy, and all their relations.

The Committee perceived, also, that the levelling principle pervaded the whole community of husbandmen, to an extent that is quite alarming to those who think it wrong to disturb the naturally undulating scenery of barren, gravelly knolls, and ponds of stagnant water, and who like the green mantle of the standing pool better than a meadow covered with a carpet of herd's grass and clover. We are not partial to a horizontal tariff; but, however unpleasantly the declaration may strike the minds of some of our aristocratic friends, the Committee must frankly pronounce their approbation of the prevalent democratic propensity, to produce a horizontal surface, by removing sand-hills to elevate the adjoining bogs and marshes. It was pleasant, moreover, to see a reclaimed meadow of fifteen acres, marked out in squares almost as numerous as those on a chequer-board, by ditches, the mud from which had been converted to manure, and, being spread on dry and barren protuberances, had transformed them to cornfields and orchards.

The Committee witnessed, with unspeakable delight, the evidences of a growing taste for the cultivation of the various kinds of fruits adapted to the soil and climate, and the success which has followed the efforts to improve the qualities, and increase the quantity, of that sort of food which nourished our great progenitors in the garden of Eden. It is said, indeed, that the eating of an apple by that virtuous pair—our chaste grandparents—in Paradise, brought upon them the awful denunciation of an offended Deity, and entailed on all their posterity the curse, to eat bread in the sweat of their brow!—but we are loth to believe that, in these degenerate days, any grievous malediction would follow the practice of eating abundantly of the fruit of our vineyards, gardens and orchards. The committee rather incline to the belief, that a more free and constant use of the fruits adapted to our soil would be conducive to health, and, as far as physical nutriment can contribute to the improvement of the intellectual powers of man, that a diet of fruits is favorable to the refinement of taste, the improvement of the mind, the progress of moral culture, and the general melioration of the human character. While the committee have seen with pleasure the increasing disposition, among their brethren of the agricultural community, to cultivate the apple, the pear, the peach, and the plum, they regret that they have seen but few and feeble attempts to embellish the roads with forest trees. A few hours at the proper season, devoted to this object, would improve the scenery adjacent to a farmer's residence. Some one has said, that every one who plants a *clump of trees* adds a beauty-spot to the face of Nature. We hope that our successors, at no distant day, may have the privilege of recording the names of many, who will have shown their grateful affection, by adding these embellishments to the already beautiful countenance of our common parent.

In their progress through the county, the attention of the committee was frequently attracted by noble fields of Indian corn. We know of nothing which can render a farm more worthy of the society's premium, than a plentiful crop of this valuable grain. In the husbandman's provision for himself, his family, and his cattle, it is an indispensable article. One of our New-England poets has said, that "all his bones were made of Indian corn;" and we cannot doubt that it enters largely into the composition of our Yankee blood and muscle, and that its invigorating energies give strength and health to the sons, and beauty and loveliness to the wives and daughters of New-England husbandmen. We compassionate the depravity of taste that cannot relish a jonny-cake, and despise the fastidiousness of appetite that cannot make a supper on hasty-pudding.

The spirit of improvement is signally displayed in many parts of the county, in the construction of stone walls. This is a branch of industry which is worthy of high commendation. The work of building a good wall is a laborious employment, and requires something more than an ordinary degree of physical power. But it is labor well expended. A farmer who gets his premises enclosed with a substantial fence of this description may defy his neighbor's cattle, however unruly; and if his division fences are of a like construction, his own animals will learn to be content in their appropriate enclosures, or at least will prefer feeding in the pasture where he places them, to the hazard of breaking their legs by leaping into his mowing lots and cornfields. The committee would hardly be justified if they neglected to notice, particularly, the walls on the farms of Messrs. A. Carleton and E. P. Spaulding, of Chelmsford, O. C. Rogers, of Woburn, and Stephen Howe, of Marlboro'. Portions of the walls on some of these farms were five feet in height, five feet broad at the foundation, and from three to four feet at the top. The improvement already made, and still in progress by Mr. Howe, excited the Committee's admiration. It is composed, in a great measure, of large masses of rock, removed from their native beds by immense labor, and not without the aid of gunpowder. One piece of wall, thirty or forty rods in length, presents an upper surface of flat stones, on which the committee walked with as much ease and rapidity as they could on the surface of the ground,—ay, and with much greater facility than one can travel across some of the fields in our county, which the owners appear to think easy of cultivation. It afforded really a pleasant promenade. But its beauty is perhaps the quality for which it should be least admired. Its strength, usefulness and durability, are its valuable characteristics. Such a wall may laugh in the face of Old Boreas, defy the attempts of frost to heave its foundation, and stand the tolerable shaking of a New-England earthquake without tottering.

There is one other feature in the system of improvement, to which the committee refer with pleasure and approbation, viz., the construction of barns, with cellars for the making of manure. A descriptive detail of all that the committee observed during the week occupied in their examination would consume more time than they have at their disposal; but they cannot omit the opportunity now presented to impress upon the minds of all their brethren the importance of saving all the ingredients that enter into the composition of that substance which renovates exhausted soil, and restores to the earth the nutritious particles which have been extracted from it by successive crops, —enabling Nature to reinvest herself in her emerald attire, and to present to her votaries her annual tribute of ambrosial flowers and golden fruits. The philosopher and the naturalist—and the farmer should be both—may take pleasure in contemplating the benign process by which ingredients, the most offensive to the human senses, are converted into articles that gratify the most delicate taste and pamper the most luxurious appetite.

In awarding the Society's premiums, the committee have endeavored to fulfil the supposed intentions of the Society; and it gives them pleasure to add, that, in no single instance, was there any difference of opinion. There were but three applications for premiums on farms, and the committee awarded—

To Stephen Howe, of Marlborough, the Society's first premium of $25 00.

To Amos Carleton, of Chelmsford, the second premium of $20 00.

There were eight applications for the premiums offered for reclaimed Bog Meadows. And here the Committee cannot stifle an expression of deep and sincere regret that they had not eight premiums instead of three, at their disposal. All the meadows submitted to their inspection exhibited undoubted evidences of industry and skill in their respective proprietors; and, though some had been reclaimed at greater cost of time and labor than others, yet none had undergone the change from worthless and unproductive fens to rich and valuable land, susceptible of exuberant production, without the exercise of patient and intelligent industry. Where all were so deserving, it was painful to make a selection; but the directions of the Society are imperative, and the Committee have awarded—

To Caleb Wetherbee, of Marlborough, the first premium of $20 00.

To E. A. and A. Lawrence, of Pepperell, the second premium of $12 00;—and

To Stephen Morse, of Marlborough, the third premium of $8 00.

The applicants for the Society's premiums for Compost Manure were only two. The Committee cheerfully award the first premium of $10 00 to Oliver C. Rogers, of Woburn.

There were five applicants for the premiums for Apple Orchards.

To Thomas S. Tuttle, of Littleton, is awarded the first premium of $15 00.

To Jonas Viles, of Waltham, the second premium of $12 00.

To Benjamin Wheeler, of Framingham, the third premium of $8 00.

There were also five applicants for two premiums offered for Peach Orchards.

To Galen Merriam, of West Newton, the Committee awarded the first premium of $10 00;—and

To Benjamin Wheeler, of Framingham, the second premium of $5 00.

Of the two premiums offered for Pear trees, the first, of $10 00, is awarded to Galen Merriam, of West Newton; the second, of $5 00, to Eliphalet Wheeler, of Framingham.

To Simon Whitney, of Framingham, is awarded the premium of $5 00 for the best and only Plum trees to which the attention of the Committee was requested.

The Committee cannot close their Report without remarking, that very few of the statements offered by the applicants present details of practice so ample as the Society requires and has a right to expect. Some of them were too meagre to afford much assistance to the Committee. It is hoped that, hereafter, more attention will be given to this subject, and that applicants for premiums will remember, that much of their own time, as well as the time of the Committee, will be saved, if they will prepare written statements, agreeably to the printed rules of the Society, previous to the official visit of the Committee.

JOS. T. BUCKINGHAM, *Chairman.*

Reclaimed Meadows.

Caleb Wetherbee's Statement.

The first object, in reclaiming my meadow, was to draw off the water and make it dry, which I did by cutting between five hundred and six hundred rods of ditches. I then began by turfing a piece, taking off the surface and carting the turf to my upland, as I was unable to dry it sufficiently to burn on the meadow. I then carted on loam and gravel and spread them about three inches thick; made a level surface, and put on about fifteen loads of compost manure to the acre. This was done in the fall of the year. In the spring, I seeded with oats and hay-seed, and had a good crop.

On the next piece, I cut only the hassocks, and put them in the low places, and made the surface as level as I could. I then carted on loam and gravel, and spread on my compost as before, seeded down in the spring with oats and hay-seed, and it did well, much better than that the season before, and at a much less cost.

The meadow contains about sixteen acres, an acre of which is planted with potatoes; the rest is in grass, from which, I think, I have taken, the present season, four tons of hay and rowen per acre. The cost of improving this meadow, after it was drained, was not far from forty-five dollars per acre. It is nine years since I began these improvements, and the first lots that I reclaimed have been every year improving in the quantity and quality of the hay.

Marlborough, Sept. 12th, 1846.

E. A. & A. Lawrence's Statement.

The piece of reclaimed meadow, to which we ask the attention of the Committee, contains about three acres, which, previous to its being reclaimed, was considered worthless, being very wet and covered with bushes and stumps. We commenced by thoroughly draining, cutting about one hundred and twenty-five rods of ditches, and then cutting the bushes. A fire was put in, which assisted much in the bogging and taking out the large stumps, besides the benefit of the ashes it made.

After bogging and taking out the wood, which was about 20 cords to the acre, we planted it with potatoes, manuring in the hill. After digging the potatoes, we have seeded down in the fall with herd's grass and red top seed, carting on loam or gravel to mix with the soil, where it would bear up a team; where it would not, we have carted it on the following winter, when the meadow was frozen, applying it as a top-dressing. The first crop of hay was about 1½ tons per acre. Continuing the top-dressing of loam and gravel for two winters, we have nearly doubled the quantity of hay, and kept out the wild grasses.

The meadow produced this season about 3 tons of good hay to the acre.

The expense of cutting bushes, and carting gravel and loam, was $25 per acre. The mud paid well for ditching, the wood for taking out and bogging.

Pepperell, Sept. 12th, 1846.

Stephen Morse's Statement.

In the fall of 1841, I commenced on the meadow now offered for premium, first, by cutting a ditch 4 feet wide and from 3 to 4 feet deep, through the centre; afterwards, by cutting border ditches sufficient to keep the water from standing upon the surface, as was usual previous to ditching. In August, 1842, I covered about half an acre sufficient to kill the wild grass, then spread on at the rate of about 20 common cartloads of compost manure to the acre, and sowed it with herd's grass. In 1843 and 1844, in August, I fixed over an acre in the same way. In 1845, I fixed over an acre by bogging and burning, and then spreading the ashes made from the turf upon the same, and sowing without any other manure. The last-named mode is much the cheapest I have ever tried, (not costing, at the utmost, more than $25 per acre,) and, I think, much the best way that a miry meadow like mine can be improved.

I cut from the acre last mentioned, at the first mowing, nearly or quite 3 tons of hay. I have cut, the present year, two very heavy crops from all, except that portion fixed last year. On a large portion of the meadow, previous to 1841, I cut but a small crop of poor hay, and that had to be polled to the hard land; now I drive my oxen upon all that is reclaimed. I consider it decidedly the most profitable land I have on my farm.

Marlborough, Sept. 8th, 1846.

Daniel Shattuck's Statement.

I have a tract of land containing 20 acres, which I wish your Committee to view. You may see what the present state of it *is*, but I must tell you what it *was*, eight years ago. It had been used as a pasture to the year 1837, when a few cows obtained rather hard fare; the ground was overrun with hardhack, kill-lamb, whortleberry bushes and alders; what space was left, beyond what these tenants occupied, was let out to breaks, and in low places, (covered a great part of the season by water,) to coarse meadow grass.

The truth is, that this lot of land had had its own way so long, that it required some castigation before it would become obedient to wholesome restraint. The first thing that was done, was to cut ditches in such way as to drain off the stagnant water from the low places; next, to mow the bushes, cut the alders and other brush, and burn them on the ground; after which, as much of it was broken up yearly as could well be attended to. I say broken up, for it was impossible to plough it so as to turn over the sod. Sometimes the plough would take a piece 10 feet by 20, all matted together by roots and fibres: this would cause the ploughman to use some very hard words. After the clods became somewhat dried, they were *charred* in heaps, thus: first, gather a few sods quite dry and set fire to them, and then pile on successive layers, keeping the fire from breaking out, as in burning charcoal. In this way, without any additional fuel, a large heap of excellent compost may be produced, while the roots and seeds of noxious weeds and bushes are entirely destroyed. This compost is spread upon the land, after which, it is planted with potatoes or corn, one or two years, then sowed with oats or barley and grass seed. Before this is done, however, the ground is levelled, the high places serve to fill the low, so that now there are no places where the water stands after a rain, to invite the return of its former occupants.

The whole lot, with the exception of a small piece, has been cultivated, and produces from one to two and a half tons of herd's grass and red top per acre. Since the first seeding, I have turned over a few acres after the "new husbandry," which has done well. I have tried salt as an experiment, but saw no good reason to repeat it. Guano does well, but, after all, I firmly believe that the compost heap will never go out of fashion.

To bring this piece of land to its present condition required some courage, with a due proportion of faith and hope. These were brought freely into use; and, while it has cost some *hard words* and much *hard work*, a full offset has been received, in addition to the crops, by the pleasure it affords in seeing a piece of land so depraved brought into a kind and obedient condition, and now so full of good works.

Some may be disposed to ask, Is farming in this way profitable? I answer, Yes. Besides the considerations above stated, the value of such lands is increased more than four-fold, and every good farmer will acknowledge it. The increased value alone will pay for all the labor bestowed upon them. There are, in the county of Middlesex, thousands of acres like them that produce nothing, and, in their present condition, are worth nothing, which might be made most valuable. I hope such lands will receive more of the attention of all good farmers.

Concord, *August*, 1846.

I. B. Farmer's Statement.

I will make a brief statement of facts, being the result of my own experience within the last seven years, on my bog-meadows. I have made several experiments, such as gravelling without ploughing, harrowing and then gravelling, harrowing and not gravelling, digging up and planting potatoes, then sowing without gravelling; burning, gravelling and sowing. But the best crops I have obtained from the following culture: I plough any time (as is convenient,) after haying, until the ground freezes; after the ground is frozen, I cart on gravel, sand or loam, as may be, to the depth of two and one half inches, spread and let it remain, until the frost is out to the depth of about four inches, (there still being frost enough left in the ground to bear up my team,) then harrow it until the mud and gravel are well mixed, then let it remain until July. I then sow on about one and one half bushels of oats, one peck of herd's grass, and half bushel of red top seed, per acre—then harrow or rake them in, as the ground admits. The oats I let stand until they are ripe, which will be about September. I have manured with compost at the rate of twelve loads to the acre, soon after taking the oats off; and I have let it remain until late in the fall, then manured; and I have let it remain until spring, and then manured; but there was but little difference in the crop of grass.

The hay on the ground that I laid down last year, in the manner described, was estimated at three tons per acre by good judges; there was no one set it at less than two and one half tons per acre, and you can judge something of the first crop, by what there was on the ground for a second. As for the growth before I drained and ploughed it, it yielded water-grass or cotton-head, as it is sometimes called—buckthorn, water-brush and blue vengeance; the grass would very little, if any thing, more than pay for cutting; the value of the land must have been small—I think it will as well pay the interest of one hundred dollars per acre now, as it would ten dollars before I ploughed it. As to the expense of reclaiming, it is impossible for me to state the exact sum, as I have always done it as a woman knits her stocking, that is, by odd jobs; the nearest I can come at it is by what it cost me to do a piece last winter—that was about nine dollars per acre for gravelling; the ploughing must vary according to the nature of the mud; probably the whole expense of ploughing, gravelling and sowing cost not far from twenty dollars per acre. The mud is of a fine, black, crumbly nature, and varies in depth from fifteen inches to fifteen feet; the bottom is generally a fine white sand, and generally, when striking a shovel into it, the water oozes out very freely.

I drain by digging a ditch in the lowest part of the meadow, and another near the hard land, which, as necessity requires, I empty into the main ditch; the latter I prefer, having what is called a blind ditch. By ploughing, I think the poorer grasses are kept out longer, and by sowing from the first to the middle of July, and letting the oats remain until September, the young grass is not as liable to be killed by the August drought, or the frosts heaving in the winter and spring.

Concord, *Sept.* 12*th*, 1846.

Edward Wetherbee's Statement.

His meadow contains about six acres. He began his operations for reclaiming three years ago last spring. The bottom was too soft and miry to admit of driving on a team. It was not worth more than five dollars an acre. Adjoining it, on the westerly side, was a large sand-bank, which gave an ample supply of material with which to commence the work of reclaiming. He began by carrying on the sand with wheelbarrows, till the surface would enable him to drive on a team. The whole was covered with sand from four to six inches in depth. A covering of compost manure was then spread over it. In the spring, it was sown with herd's grass and red top. The quantiy of hay produced the present year was three tons to an acre—herd's grass, red top, and clover. The hay is worth ten dollars a ton,—consequently, the product is thirty dollars an acre,—on land, which, three years ago, would not have brought more than five or six dollars, if offered for sale. The whole expense of reclaiming was about twenty-five dollars an acre.

Acton, *Sept.* 1846.

ORCHARDS.

Thomas S. Tuttle's Statement.

In the apple orchard which you have examined, fifty of the largest trees were set out in 1840 in April, and are now nine years old from the stock. The remainder were set out in 1842: those of the largest size are now seven years old. The next class were only one year old when set out, and are now but five years from the stock. The ground, when the trees were set, was in a middling state of cultivation. The holes were dug two spades deep; the same earth thrown out, after being mixed together, was put back into the hole without any manure. In the fall, I applied to each tree about fifteen shovels full of manure well mixed with the earth. I consider late in the fall decidedly the best time for applying manure.

Due regard, I think, should be paid to the form of the tree in setting. Invariably the heaviest side, or the part of the top which will best protect the body of the tree from the sun, should be south. Every careful observer will notice that, in consequence of our frequent south-west winds, very many of our fruit trees lean towards the north-east, which leaves the body exposed to the sun; the bark becomes scarred, in a few years the tree begins to dwindle, and very soon is good for nothing.

In selecting trees for transplanting, due attention should be paid to the form of the roots as well as to the top. Trees that have been transplanted previous to grafting, or budding, are much to be preferred, the roots being greatly improved. I have set fruit trees in the fall and spring, and, from observation, find those set in the spring have done much the best. In selecting trees for the orchard, I have paid but little regard to the price, provided I could get good, thrifty, well-formed trees.

Littleton, *Sept.* 11*th*, 1846.

Jonas Viles's Statement.

My orchard consists of upwards of two hundred apple and three hundred peach trees; two hundred of the peach trees having been set out since 1844. The land is naturally stony, of a strong loamy soil, the bottom rather a clay gravel. My plan, in setting out an orchard, is to have apple and peach trees on the same ground, the apple trees two rods apart, and the peach between them. I dig a good-sized hole, use wood ashes for manure, covering the roots with the soil, then putting on from one to three quarts of ashes, according to the size of the tree. I think this keeps the insect from the root, and, in case of dry weather, keeps the ground moist. In pruning, I do not like to leave limbs too low, on account of ploughing and working among them; neither will the fruit be so handsome where the limbs come too near the ground.

Waltham, *Sept.* 15, 1846.

Benjamin Wheeler's Statement.

The peach and apple trees you examined on my farm were set out in the spring of 1845. The land was a rocky pasture; it had been in pasture for about thirty years. The stones were dug out in the fall of 1844, and the land was ploughed, and the holes were dug at the same time. There was some manure dug in around the apple trees; it was compost made of part mud and stable manure. The peach trees were not manured at all. Last year, the land was planted with potatoes, and a light dressing of manure was spread on. This year, it was planted with corn. 'The trees near the house were set out in the spring of 1843; part of the land was very dry and gravelly, and, at the lower side, the soil was a deep yellow loam. The holes were dug six feet across, and from eighteen inches to two feet deep. The top of the soil was mixed with peat-mud and put to the bottom of the holes. Since the trees were set out, the land has been well manured, and cultivated with carrots and potatoes; the trees have been well trimmed, and dug round with a spade.

Framingham, *Sept.* 17, 1846.

Galen Merriam's Statement.

Of peach trees, I have over six hundred, the most of which have been set out within three years. I have one hundred and twenty-eight pear trees, about one third of which have borne fruit, and about one fourth of which are on quince stocks. I have twenty-four plum trees, set out in 1845 and 1846; between thirty and forty cherry trees, twenty of which are in bearing, and ten quince bushes, which are full of fruit. I have also over two hundred apple trees, half of which bear fruit. The whole occupy less than six acres of land.

Many of the peach trees have not come into bearing. In 1845, I had between fifty and sixty bushels of peaches. I presume I shall have about the same quantity this year. Last year, I sold one hundred and fifty-five dollars worth, principally by the dozen, as I did not send to market the small peaches. I have set out my trees both in the spring, and in the fall, but prefer the spring. I do not know that I have ever lost a dozen trees. I have never lost but one by being winter-killed. I wash the trees with whale-oil soap, with a small quantity of saltpetre dissolved in it, twice during the season. In November, I put half a bushel of charcoal dust around each tree. I usually keep the ground ploughed, and planted with potatoes.

West Newton, Sept. 14, 1846.

Milch Cows.

There was awarded

To Ephraim P. Spaulding, of Chelmsford,	1st premium, .	$8
" Elijah Hale, of Stow, . .	2d " .	6
" Jonas Viles, of Waltham, . .	3d " .	4

Ephraim P. Spaulding's Statement.

The cow I offer for premium is the same that received the second premium last year. She is 7 years old, calved April 13th, and is now with calf to come in April 7th. I have measured her milk in June and August, seven days each time.

From June 14th to June 20th, 7 days, she gave 85½ quarts.
" Aug. 13th to Aug. 19th, 7 " " 77¾ "

She had nothing in June except what she got in the pasture. In August she had green corn fodder at night, but no grain. She gives now 9 or 10 quarts per day.

Chelmsford, Oct. 7, 1846.

Elijah Hale's Statement.

The cow I offer for premium is of native breed, 8 years old. She calved March 14th. Calf, when 5 weeks old, weighed 115 lbs. Sold for $8. Sold 80 galls. milk at 12 cts. a gallon, $9 60. Made 145 lbs. butter up to Oct. 3, besides supplying my family with milk and cream, which were used unsparingly for cooking and various purposes, family averaging five in number. Her keeping through last winter was on good hay; commencing with one quart Indian meal two weeks before calving, and continuing while fattening her calf. Since, she has had no extra keeping, except a good pasture.

Stow, Oct. 7, 1846.

Jonas Viles's Statement.

My cows are 4 and 5 years old. The oldest calved the middle of July. Since that time, she has averaged 18 quarts of milk daily. The other has averaged 15 quarts of milk daily. The latter calved in June. They have been kept with 12 other cows, and shared the same as the rest, with the exception of three quarts of meal per day.

Waltham, Oct. 6, 1846.

AGRICULTURAL EXPERIMENTS.

There was awarded

To Joel Hayward, of Ashby, for the greatest quantity of Indian Corn to the acre, 1st premium, ...	$10

To Amos Wellington, of Ashby, for the greatest quantity of carrots on ⅛ of an acre, 1st premium, ... $6

Joel Hayward's Statement.

I have raised this season, on one acre of ground, ninety bushels and seventeen quarts of shelled corn. The ground on which I raised the corn was planted with potatoes last season, and was formerly an old pasture that was never ploughed until the summer of 1844. I put on, this season, 35 loads of manure; one half I spread and ploughed in nine inches deep, the remainder I put in the hill, and furrowed but one way three feet apart; the other way I planted two feet apart. I left to grow five stalks in the hill; I hoed three times. The corn was the small Canada corn.

Ashby, *Dec.* 29*th*, 1846.

Amos Wellington's Statement.

I have raised forty hundred and fifty-six pounds of carrots on 20 rods of ground, the past season. The land is deep soil, and was prepared in the following manner: The ground was ploughed very deep early in the spring, and four loads of compost manure were spread and harrowed in. About the middle of May, the ground was ploughed again deep as before. On the 20th, the seed was sowed with a machine in rows, one foot apart, and the carrots left from 3 to 5 inches the other way.

Ashby, *Dec.* 29*th*, 1846.

WORCESTER COUNTY AGRICULTURAL SOCIETY.

FROM the Reports of Committees of this Society, and Statements accompanying the same, the following selections are made.

PLOUGHING MATCH.

Eighteen teams, of one pair of oxen each, were entered, sixteen of which appeared on the field. The Committee award

To David Carpenter, of Charlton,	1st premium,	$10
" Tyler Carpenter, of Sutton,	2d "	9
" Lorin Carpenter, of Charlton,	3d "	8

Here the Committee inquired, whether there was not some charm in the name of Carpenter, which had been so long and so favorably known upon our plough-fields, which was misleading them. But as this third premium was given by the casting vote of the Chairman, from minutes made by him on the field, without knowing the name of the person to which they applied, the Committee concluded that merit was the only charm.

To Anson Warren, of Westborough,	4th premium,	$7
" Harvey Putnam, of Sutton,	5th "	6
" Joseph H. Whitney, of Westborough,	6th "	5
" Horace Stockwell, of Sutton,	7th "	4
" Benj'n Harrington, of Westborough,	8th "	3
" Jotham B. Pratt, of Worcester,	9th "	2
" Thomas J. Wheelock, of Grafton,	10th "	1

There was much difference in the neatness with which the work was done, and particularly that part which was observable during the progress of the work. It seems never to have been learned, by some, that not only the hands and feet, but the eye, must be kept constantly in activity. A crooked and ill-defined land side of the furrow looks slovenly, and is a hindrance to laying in the next furrow.

REJOICE NEWTON, *Chairman.*

FAT CATTLE.

Thirteen oxen, one pair of steers and five cows, were entered for premium, all of good quality, and meriting favorable consideration. The Committee award

To Ebenezer L. Barnard, of Worcester, 1st premium, $12, for his native dark-red ox, of 5 years, weighing 2285 lbs.

To Paul Newton, of Worcester, 2d premium, $10, for his ox of 5 years, mixed breed, weighing 1640 lbs.

To Holloway Bailey, of Northborough, 3d premium, $8, for his native ox of 7 years, weighing 1710 lbs.

To Lewis Barnard, of Worcester, 4th premium, $5, for his native brown ox of 7 years, weighing 1850 lbs.

Putnam King, of Sutton, entered, for premium, one pair of steers, two years old, of native breed. He had no competitors, nor would it have been easy for any person to have proved himself a successful one. These steers were objects of just admiration, and the Committee do not hesitate to award to their owner the first and second premiums of $10 and $6.

SAMUEL M. BURNSIDE, *Chairman.*

MILCH COWS.

The Committee on milch cows regret that the number offered for premium and exhibition is less than in years past: four for exhibition and six for premium—four of which, for want of proper certificates, were placed with those for exhibition, leaving but two entitled to the premiums of the Society, neither of which, by the rules of the Society, is entitled to the first premium. The cow of Wm. Eames, of Worcester, raised by him, half Ayrshire, 5 years old, from which he received, from the 10th to the 20th of June, 386 lbs. of milk, from which was made 19¾ lbs. of butter, and from the 10th to the 20th of September, 323 lbs. of milk, making 15½ lbs. of butter. To Mr. Eames the Committee award the second premium of $7.

Nathaniel Stowell, of Worcester, offered a cow raised by him, one quarter Durham, which furnished, from the 10th to the 20th of June, 388 lbs. of milk, making 17 lbs. butter, and from 10th to 20th September, 208 lbs. milk, making 10 lbs. butter, to whom is awarded the third premium of $6.

Jacob W. Watson, of Princeton, whose interest in the Society's exhibitions appears unabated, offered for exhibition a fine Durham cow, four years old, to whom the Committee recommend a gratuity of $3.

Abiel Jaques, Jonas Munroe, Jotham B. Pratt, all of Worcester, offered for exhibition cows of good qualities. Your Committee would be gratified to be able to say much of all the cows, and hope that future Committees will be furnished with materials to enable them to speak in the highest terms, and in detail, of those exhibited. The importance of the subject demands a greater interest on the part of the farmer.

By reference to the statistics of the products of certain branches of industry, made in conformity to a late law of the State, it will be seen that the income derived from the cows in this county is *one quarter* of the *whole amount* of the income of cows in the Commonwealth, and more than double the amount of any other county, excepting Middlesex. The average value of neat cattle, as returned throughout the State, is about $19; that of this county, $20. By returns made to the State of New York, it appears that about one third of the neat cattle of that State are "cows milked." Taking that basis for this county, the average income of each cow is about $21. A writer on working cattle, in a distant State, made mention of the "*far-famed and boasted oxen of Worcester county, Massachusetts.*" Your Committee feel that the average income of our cows must be increased, before the same praise can be bestowed upon them.

The capital employed in this branch of the farming business, in this county, cannot be less than one million of dollars. This amount required in a mechanical business is sufficient to create, in the *mechanic*, a strong desire to be in possession of all the improvements and facilities within his reach, for the more profitable prosecution of his business. There are but two branches of agricultural and nine of mechanical industry, in the Commonwealth, that yield a greater income than that derived from the cow. Self-interest, the most powerful incentive, should lead to that improvement in stock which will insure to the farmer the greatest return for capital invested and labor expended.

GEO. DENNY, *Chairman.*

POULTRY.

Among other poultry, the Committee, Abiel Jaques, Chairman, say that 16 lots of barn-yard fowls were entered,—one lot by Eben. Lincoln, of Grafton. For this lot we gave Mr. Lincoln the highest premium, $3; also, a gratuity of $1 for his written account of the produce of 27 of his fowls for the last seven months, viz: 199 dozen eggs at $28, and 92 chickens at $23; total, $51—besides 29 dozen eggs used in his family. Feed—some meat, some fish, all kinds of grain, some lime or pounded shells, enough sand and water, a warm dwelling and good roosts.

BUTTER.

The Committee are under obligations to Samuel Chamberlain, of Westborough, for his information in regard to the manufacture of butter. His experience is great, as he has made, during the past season, 4400 lbs. It is not his custom to place his milk in the cellar, unless he can obtain a good supply of cool air. The milk is allowed to stand for six and thirty hours before skimming, and the cream is then reduced by ice to the temperature of 56°. The Committee have awarded

To L. B. Hapgood, of Shrewsbury, 1st premium,	. .	$6
" Melvin Allen, of Shrewsbury, 2d "	. .	5
" Charles E. Miles, of Shrewsbury, 3d "	. .	4

The Committee congratulate the town of Shrewsbury upon the excellence of the manufacture of its farmers, and the success which they have so deservedly obtained.

To Otis Longley, of Boylston, 4th premium,	. . .	$3
" George Flagg, of Holden, 5th "	. . .	2

The Committee know not whether each farmer has a wife who, from this time, will stand higher in her narrow circle, and often recall the proud day of her success, as she lays down, with the precision of a housewife, the rules to be used in the dairy; they know not whether he can meet, on his return home, bright and rosy-cheeked daughters, and thank them that he has received the prize, and praise again the domestic skill and industry that has won it: but this they do know, that many a bright eye has looked upon these firkins; that many a healthy girl has bent over the bubbling cream till the tempting yellow butter "has come;" that many a fair hand, larger, it may be, than some displayed by our polished ladies, but one not less useful to her friends and county—that many a fair hand has moulded its balls, and tempered it with loud-sounding blows, and that many a weary husband and father has praised the result of their labor as he has taken his evening meal beside them. It seems to us that this article comes bearing a different stamp from all the others. The orchard, the garden and the barn have each displayed their stores; but this is a manufacture from *home*.

WILLIAM R. HOOPER, *Chairman.*

Cheese.

The Committee, Otis L. Bridges, Chairman, are of the opinion that in no former year has this agreeable and necessary luxury of the table been exhibited in greater perfection, and perhaps it would not be saying too much, to ascribe this excellence in cheese, as in other articles of domestic comfort, to the great impetus which the Society has given in exciting a very commendable emulation among our farmers; and we take this occasion to say, that great honor is due to our fair countrywomen, for their skill and *good taste* in this behalf. The ancients had a fair goddess who presided over the dairy; but in Worcester County there are thousands as fair, each of whom presides over this department of human industry with far more intelligence and good thrift, and your committee have no doubt makes much better butter and cheese.

Mechanics' Tools and Agricultural Implements.

The first articles that came under the inspection of the Committee, were nine ploughs, manufactured by B. Martin, of Sutton. These were good substantial ploughs, and, in the opinion of the Committee, so far as their shape and other qualities for working were concerned, might be as serviceable as any exhibited ; but they had not that smooth finish and nice workmanship which characterized those exhibited by Ruggles, Nourse and Mason.

A plough called Sward D, (by R. N. & M.) for breaking up and reclaiming meadows, was next examined. A sharp, steel-edged share, cutting very widely, is affixed to this plough, and also a reversed cutter, for the purpose of ploughing, and turning completely over, wet meadow-lands. It is so constructed, that the fixtures for meadow-ploughing can be removed, and a common share appended, when it becomes adapted to rough upland soils, thus serving the double purpose of an upland and meadow plough. The committee consider this an important article for those farmers who have large quantities of unproductive meadow lands.

A plough, with a draft-rod clevis attached, was the next that came under the inspection of the committee. This is so arranged that the clevis may be turned so as to make the plough run more to land, or vice versa, at pleasure; consequently, it may be so adjusted as to let both oxen travel on the unbroken ground and still the plough will not run to land too much; or both may travel on the land already ploughed, and yet the plough will run sufficiently to land. The last arrangement is peculiarly adapted to ploughing close up to a wall or ditch. The clevis may also be so arranged, as to enable the ploughman to plough deeply, or shallow, at will.

The next and last plough, examined by the committee from this establishment, was a new invention of the present year. This plough is called the "*Self-sharpening and adjusting steel-pointed Plough*," and is of the same general construction as the Eagle plough, except that the point and share consist of two pieces constructed upon a self-sharpening principle. "The point is a wrought bar of iron steeled at each end, about twenty inches in length, straight, and passing upwards into the body of the plough. As it wears away, it is easily moved forward; and as it becomes worn on the underside, it is turned the other side up, thus always presenting a sharp point of full length and proper shape. When one end of the point or bar is worn off five inches, it is reversed, and the other end performs a like service. The wing or share is also reversible, and can be used with either end forward, or either side up. Both point and share are so very simple in their construction, that any blacksmith can renew them at trifling expense with wrought iron and steel." The committee were of the opinion that this article is particularly worthy the consideration of the farmer. They recommend a gratuity of two dollars to Ruggles, Nourse and Mason.

An ox cart and two ox wagons were exhibited by Abel Paine, of Smithfield, R. I. The superiority claimed for these, over the ordinary kind, consists in the hub being capped so as to exclude the dust from the boxes, and in the axletree being so adapted to the height of the wheels as to produce the least possible friction; consequently diminishing the draft. The manner of fastening the body down is also claimed as new.

The fastening consists of a steel spring lever, moving to the right and left, and secured by a hook on the pole, being a greater convenience than any method before known to any of your committee. They are much lighter than the ordinary kinds, but appear to be very strong, and one of the committee, from the south part of the county, stated that these carts and wagons were much used and esteemed in his vicinity.

A machine for planing window-blind shades, a new invention recently patented by Arad Woodworth, of this town, was also exhibited. It was stated, by the gentleman who accompanied it, that it would plane eighty-five slats in a minute, making a saving in labor, over the ordinary way, of one hundred per cent. or more. They recommend a gratuity of two dollars on this machine.

The miniature Car Truck, by Mr. Rice, is an ingenious contrivance, having a spring fulcrum in the centre, which is fastened by chains to the truck at the corners, each end, and each side. The centre of the car is to be fastened to this fulcrum by a bolt. The object of the suspension by the chains, is to avoid the severity of the shock, in case of the wheels passing over any object; and also to prevent the vibratory motion of the cars while running. The committee recommend a gratuity of two dollars to Mr. Rice.

WARREN LAZELL, *Chairman.*

ROOT CROPS.

The committee were seasonably informed, by the Recording Secretary, that D. Waldo Lincoln, William A. Wheeler, and Jonas Hartshorn, of Worcester, had made entry as competitors for the carrot crop, and Harvey Dodge, of Sutton, both for the crop of carrots and of sugar-beets; but that, in relation to all but the two first, the rules of the Society had not been strictly complied with. The Committee were disposed to proceed, in the discharge of their duty, in the same manner as they would have done if all the entries had been made in strict compliance with the rules of the Society, reserving the question of error, to be considered at a subsequent time, if it should become necessary. Before proceeding upon the examination of the crops of the competitors, they viewed the carrot field of Mr. Hammond, a member of the committee, which had not been entered in competition with others, and is now noticed, as presenting to them a singular appearance. The tops had evidently been, but a short time before, of a most luxuriant growth, and from some cause unknown to the committee, unless it had been occasioned by the severe drought which had prevailed the last summer and autumn, the tops of the greater part of the roots were lying on the ground in a decayed state, and, in some instances in which the rot had extended to the root, places were found, where roots of large size had decayed, leaving holes in the earth, of corresponding size.

The chairman availed himself of the opportunity of examining Mr. Hammond's barn, which has been erected within a few years, and although this may not be considered as strictly within the limits of the duties imposed by the Society, having relation to the growth of vegetables, it may not be deemed altogether inappropriate, as he can assure them that it is an uncommonly good place to spend a root crop.

The barn is ninety feet long, forty-two feet wide, and eighteen feet posts, above the basement or cellar which extends under the whole barn. This cellar is open to the yard on the east side of the building. The place for the cattle is on the west side of the barn floor, both of which extend the whole length of the building. The floor for the cattle-stable is let down two feet below the sills of the building, giving thereby more room for hay over the cattle, and making it more convenient to feed them, from the centre floor. The manure is let down behind the cattle into the cellar below, there to be mixed with other substances, and where all the urine is saved, for beneficial use. At that time, there was a large quantity of dung in the basement story, protected from evaporation and the washing of rains, retaining its full strength. This manure was produced by his cows during the past summer. Mr. Hammond has, during the last season, kept his cows in the barn, from the time of driving them for milking in the afternoon until they were turned out, after being milked, in the morning. During the spring and former part of the summer, the feed being good, the cows came to the barn full, and required no additional food. After the feed of the pasture became short, in consequence of the dry weather, the cows had given to them in the barn some green corn, which had been sowed for fodder. Mr. Hammond has sold his milk for many years, and he thinks that his cows have never done better than the present year, and he has saved a large amount of manure, in all its strength, and all the urine, during the time, which formerly was lost, and that this saving of the solid and liquid manure has been greatly beyond a fair compensation for any additional trouble in thus feeding his cows. It would be wrong to leave this barn, which might well serve as a model for those who may have occasion to construct such a necessary building, without further notice of it above the sills. The barn floor, in its length of ninety feet, enables the owner to have several loads of hay to stand on the wheels at the same time, secure from rain; an important advantage on the sudden approach of a shower, with other hay in the field to be taken care of, and, towards the close of the season, may be filled up in part with hay, straw, or fodder, if more room is wanted, instead of stacking out, to the great detriment of the food. The width of this barn, as well as its length, and the height of the posts, give it great capacity for holding hay, and with that it was well filled.

The Committee proceeded to view the crop of carrots of Mr. Wheeler. The drought had severely affected the field, being of a light gravelly soil; the tops, the growth of the summer, had perished, and a new growth had commenced, and the whole appearance was unfavorable to any prospect of a premium. The disappointment of Mr. Wheeler has doubtless prevented him from making any further communication in relation to this crop.

From the land of Mr. Wheeler, the committee proceeded to the field of D. Waldo Lincoln; his crop was in a very flourishing condition; it had not apparently suffered from the effects of the drought, either top or bottom, and they cannot omit availing themselves of this opportunity of congratulating him upon the evidence presented to them of his improvement in good husbandry; the present year he taxed his land with the growth of one crop only; the last year the Committee were of opinion that he was cultivating on the same land, one crop for its roots and another for its seed, carrots and Roman wormwood; and that it would have been better to have those crops separate, *provided* he could promise himself any advantage from the growth of so noxious a weed.

The Committee then viewed the field of Jonas Hartshorn. The crop had somewhat suffered from the dryness of the season, or from a rust which had visited the crop. Some of the tops on different parts of the field had decayed, and also some of the bottoms.

They then proceeded to the house of Harvey Dodge, in Sutton, to examine his crops both of carrots and of sugar-beets. The land appeared in good condition, and had been well cultivated. Although the product of his land might have been less in consequence of the dryness of the season, the growth did not show the evidence of it that was witnessed on the fields of Messrs. Hammond and Wheeler, and, in a less degree, on the land of Mr. Hartshorn—that of the decay of both tops and roots, or either of them. Some of the carrots which they pulled were larger than any other which they had seen. The rules of the Society require that the statement of the competitors shall be filed with their Recording Secretary before the 15th day of November; on that day, no such statement was in the possession of that officer, or of the Committee, except the one furnished by D. Waldo Lincoln. The Committee were of opinion that the other competitors were excluded from receiving a premium by their own neglect, however strong might be their claims in other respects; and they have, therefore, awarded to D. Waldo Lincoln the first premium of $8, for his crop of carrots.

Messrs. Hartshorn and Dodge subsequently furnished their statements; that of the former was not accompanied by the necessary certificates; that of the last-named gentleman contains much useful information, which, it is regretted, was not received in season, as it would have entitled Mr. Dodge to a premium. The Committee are of opinion, that the merit of that communication will justify them in recommending that the Society present to Harvey Dodge "Washington's Letters on Agriculture," as a mark of their approbation—a gratuity which they believe that he will estimate more highly than he would the pecuniary amount of the highest premium.

No application was made for a premium for a crop of ruta bagas, and none for potatoes; for the latter, no application was expected at the time of the appointment of your Committee. The rot commenced unusually early in the season, and rapidly extended—so much so, that it became the cause of much alarm that the whole of the crop of potatoes would be destroyed. After this disease had continued with much severity for a few days, it was suddenly arrested. The causes of the commencement and termination of this great evil are alike unknown to your Committee, and they will not follow the example of others, who make a dissertation on a subject they do not understand. The crop of potatoes, although unusually small, is much greater than was expected during the alarm of summer.

JOHN W. LINCOLN, *Chairman.*

D. W. Lincoln's Statement.

The land upon which my crop of carrots were grown, was, a few years ago, a part of an old pasture,—had never been ploughed until the autumn of 1843. The two following seasons, it was planted with potatoes and sparingly manured. Last spring, about thirty loads of good barn-yard manure was spread upon it and ploughed in. The seed was sown the last week in May, but, owing to the dry weather that followed, it did not vegetate well. The land was hoed three times during the season; the weeds, at each hoeing, having got the start of the carrots. The crop was harvested the second week in November, and the produce, from sixteen and a half square rods, was two hundred and forty baskets of fifty-six lbs. each, or two hundred and sixty-eight bushels, being at the rate of seven hundred and sixty bushels to the acre. But for the extreme dry weather during the latter part of the season, the yield would have been much greater. The soil was a deep loam, but altogether too strong for the crop. The account of the cost of the crop is as follows:—

Interest on the value of the land at $100 per acre, -	$2 00
Ploughing twice and harrowing two half days, man and team, - - - - - - - - - -	2 00
Seed, and sowing same, - - - - - -	1 00
Manure, 30 loads, and carting, $40; (⅓ to the crop,) -	13 00
Weeding three times, (10 days,) - - - - -	10 00
Harvesting 6½ days, oxen 2 days, - - - -	8 00
	$36 00

Worcester, *Nov.* 14, 1846.

Jonas Hartshorn's Statement.

On the land, in 1844, was grown a crop of potatoes without manure; it was prepared for a crop of carrots in the spring of 1845, and on it was put six loads of green manure, and the product was a good crop of carrots. The condition of the land in the spring of 1846 was very good, on which was placed five loads of green manure and three loads of compost manure. The ground was ploughed three times, and, on the third of June, the seed was sowed with a seed-sower. July, first weeds were taken out the first time, and the crop was harvested November 5th, and measured 163 bushels. The expense as follows:—

Seed, - - - - - - - -	$0 19	
5 loads green manure, - - - - -	6 25	
3 " compost " - - - - -	2 25	
Cultivation, - - - - - - -	6 25	
Harvesting crop, - - - - - -	6 52	
		$21 46

163 bushels carrots at 25c., - - -	$40 75		
3 bushels English turnips, on same land,	75		
		$41 50	
		21 46	
			$20 04

Harvey Dodge's Statement.

The land on which my carrots were grown, the present season, is a deep yellow loam, being upon a clayey soil—condition in the spring of 1845, of the land on which my carrots grew, was grass, had been laid down nine years without manure. Spring of 1845, forty loads of good stable manure, of twenty-five bushel loads to the acre, was spread and turned under: corn was planted—the product was seventy bushels of sound corn, and two hundred and twelve bushels of flat turnips to the acre.

The land on which my carrots grew, the present season, contains forty square rods by measurement, and is a part of the above field.

1846.	Carrot Field.	*Dr.*
May 5,	To 7½ loads, of 25 bushels to load, manure, -	$7 50
"	Carting and spreading same, - - -	1 00
"	Ploughing in manure, - - - -	50
May 25,	Ploughing, cultivating and fitting for seed second time, - - - - -	50
May 28,	¾ lb. carrot seed, at - - - -	62
"	Sowing same with seed sower, - -	25
June 12,	Hoeing with shuffle-hoe between rows before the root was up, - - -	50
July	Boy labor, weeding and hoeing, - -	3 00
"	2½ pecks guano, - - - - -	78
Nov. 14,	Harvesting crop, - - - - -	6 00
		$20 74
Interest on land,	- - - - - - -	3 00
		$23 74

Cr.

November,	By one half manure back for other crops,	$3 75
“ 15,	“ 196 bushels of 56 lbs. carrots at 25c.,	49 00
		$52 75

The written statement, in regard to the expense of growing my carrots, I believe to be substantially true; in regard to my estimate for weeding, to some, I presume, it may seem low; but I believe, if it had been done by a man at one dollar per day, it would have fallen below, rather than above, my estimate, and the price per bushel, 25 cts., is considerably lower than I should be willing to sell my carrots for.

In regard to raising carrots, there has not, to my knowledge, been but a little done in our country. There seems to be a universal dread, with a large part of our farmers, of getting down on their hands and knees, and weeding, as our fathers used to, lowery days in hay time. To all such as go back to the time when they sowed by hand a small patch of ground in a very weedy garden, and pulled out the weeds with their fingers on rainy days, when they thought they could do nothing else, to all such people as have dirtied their fingers on rainy days to improve the condition of the roots, if it was for me, I should say that they had done more hurt than good.

My practice has been to sow my carrots on land where not less than one or two crops of corn had been taken, and where the ground had, while in corn, been ploughed deep and well manured, and kept free from weeds. The seed should not be sown until the ground has been well pulverized. I should prefer sowing as soon as May 20, but should prefer June 1st, unless the ground was very light and fine; by sowing late, we save much labor, for the carrots will be up almost as soon as the weeds, so that they can be worked. My land, at the time I sowed my seed, was in fine condition. The print of my machine was visible for some days, so that we could hoe between the rows, which was done, with a sort of shuffle-hoe, before the carrots were up. This hoe was manufactured from a piece of grain cradle scythe, about 15 inches in length, just long enough to pass between the rows, and a light pine handle with a common goose-neck fastened with a rivet in the centre.

This instrument was run through the rows, which were 18 inches apart, as lightly as possible, once a week; consequently, it took off all the weeds much easier than it could have been done with a common hoe. This hoe or piece of scythe was not more than two and a half inches wide, so that, by running it through so often, the ground was kept very light and free from weeds. We thinned the rows and pulled out the weeds by hand but once, and all the rest was done with this hoe. None of this hoeing was done while the dew was on, or in wet days, but from ten to three, while the sun shone the hottest. In this way, the hoe going not more than half or three-fourths of an inch under ground, and the weeds and loose dirt falling over the back of the hoe, left the soil in so loose a condition, that the heat of the sun destroyed all the weeds at once, which, if the work had been done in dull weather, would have sprung up with more vigor than before, and the plant itself been injured.

The two and a half pecks of guano were spread broadcast on two different parts of the field without much apparent effect.

The carrots were not harvested until the 14th of November, and, I think, they continued to grow until harvest.

At harvest, the tops were cut with a common grass scythe, and raked; and one of Ruggles, Nourse & Mason's sub-soil ploughs, with the flange on, was run so close to the rows that the carrots were picked out without the aid of a spade or bar. This plough I consider the best instrument we have for digging out carrots, and I suppose no one will dispute its qualities for stirring the ground before planting. I feel confident that, if I had used it before planting, and had manured in proportion to the depth, with the same labor, I should have been a great gainer in the end.

My crop of sugar-beets entered for the Society's premium was raised on thirty-six rods of land belonging to the same field, and next adjoining my carrots, and was treated in the same manner that my carrots were, the seed, three-fourths lbs., sown the same day with seed-sower, the rows were full twenty inches wide, nd the work was weeded with the same hoe and in the same manner that the carrots were. I allowed the plants to stand ten inches on an average; we had no weeds to pull, the above described hoe did all but thinning out; ashes were used on one part of the field, which, I have no doubt, had a tendency to injure the plant. Contrary to my expectation, from this piece I harvested 156 bushels of 56 lbs. to the bushel.

The expense of weeding, hoeing and harvesting this crop, I estimate at two thirds that of my carrots—say sixteen dollars, including interest on land, manure, seed and labor. The roots for making milk are worth, at least, twenty cents for fifty-six lbs.; this would make my crop worth $31 20. I think that fifty-six lbs. of sugar-beets will give as many quarts of milk as fifty-six of carrots; but I would, by no means, be understood that they are so valuable as the carrots for horses or dry stock. My cows in milk, that have been fed on beets this season, have been kept in finer condition, and have given larger quantities of milk, than on any feed of like cost I have ever given them. My carrots are generally fed out, with a change of turnips from January to May. With one peck of this feed, per day, to a cow, and chopped hay, with four quarts of cabbage, or the like quantity of wheat bran or stalks, this fodder, with a warm stable and good attention, will produce as much milk in winter as from the like cow in common pasture in summer; how milkmen can produce milk in winter on dry hay and corn meal alone, to a profit, is more than I can solve.

I have been particular in describing my method of raising roots, not because I suppose it better than many others, but because, desirous that others who have had a great reluctance to engage in the root culture, should judge for themselves whether they can do so well with one fourth of an acre of the best corn land, as to prepare it in the best manner and sow it to carrots. Our county has, for four or five years, offered very liberal premiums for small lots of roots one fourth of an acre: so small, indeed, that any one who occupies five acres, can spare this much for roots designed for his stock in winter. This method, once adopted, will very much improve the condition of our stock, and bring more competitors for premium than we have thus far had.

Sutton, November 30, 1846.

Experiments with Cut and Uncut Hay.

Having understood, in conversation with the Hon. George Denny, of Westborough, that he had made some experiments in relation to economy in using cut feed in the support of neat stock, I requested him to communicate to me, in detail, those experiments, that the public might have the benefit of them; and, in compliance with that request, he has kindly sent me the annexed communication, which contains much valuable information. It is to be regretted that experiments, conducted in so systematic a manner, should not have been made under circumstances which should have produced a result which would have been definite and conclusive. This result would have been more satisfactory, had the experiment been made with two cows at the same time, one with *uncut*, and the other with *cut* feed, both occupying the same stable, and under the influence of the same state of the atmosphere. It is well known, that the degree of temperature has an important influence on the amount of food consumed by a cow, and also the secretion of her milk. It is very desirable that experiments should be made in such manner as to settle the question definitely, not only whether there is any economy in the cutting of hay, but also, the amount of that saving, if any. A farmer of this county, entertaining these views, has authorized me to offer a premium of $30, for the most satisfactory statement of a series of experiments for the purpose of settling this question. The trial to be made with at least two cows; their condition to be as much alike as is practicable, particularly as regards age, time since calving, &c., and the time of trial to be continued 28 days, divided into periods of 7 days each. One cow to be fed with *cut*, when the other has *uncut* hay, and the food of each to be changed at the expiration of 7 days, and so alternately each 7 days during the trial. The statement to give a particular account of what is received by, and returned from, each cow, during each period of 7 days; the account of the hay, (roots and meal, if given,) water, milk, manure and temperature, to be taken in the manner stated by Mr. Denny. The same kind of hay (what is usually called

English hay,) to be used during the whole experiment. The roots and meal may be given or dispensed with, at the option of the person making the trial, provided that they be given or dispensed with altogether during the several periods, that the *quality* of the food during the whole time may be precisely the same. Each of the cows to be weighed at the commencement and expiration of each 7 days; and, that the experiment may produce the most satisfactory results, the time of giving food and water should be regular, and also of the milking; and it is desirable that the first voiding of manure, both solid and liquid, after the expiration of each 7 days, should be noted both as to the time and weight; the state of the cow, at the time of commencing the trial, to be given, the time of her having her last calf, and every other circumstance, either in relation to the animal or trial, that can have any influence upon the decision of the question. The statement to be forwarded to the Corresponding Secretary of the Worcester County Agricultural Society, on or before the first day of April next, to be by him laid before the judges to be appointed by the Trustees of that Society for their adjudication.

JOHN W. LINCOLN,
Cor. Sec'y Worcester County Agricultural Society.

December, 1846.

George Denny's Statement.

I give below the result of an experiment in reference to cut and uncut fodder, made the past winter, with one cow, seventy-five days after calving, at four different periods of six days each, showing the amount the cow *received* and *returned.*

No. 1.

Hay, herd's grass, *cut*, 130 lbs. Carrots, 90 lbs. Cob meal, 24 lbs. Water, 363 lbs. Milk, 127½ lbs. Liquid and solid manure, 457 lbs. Average temperature, 31°.

No. 2.

Hay, equal parts meadow and herd's grass, *cut*, 110 lbs. Carrots, 90 lbs. Cob meal, 24 lbs. Water, 400 lbs. Milk, 121½ lbs. Manure, 431 lbs. Temperature, 29°.

No. 3.

Hay, like No. 1, *uncut*, 140 lbs. Carrots, 90 lbs. Cob meal, 24 lbs. Water, 425 lbs. Milk, 123¾. Manure, 403 lbs. Temperature, 16°.

No. 4.

Fodder, equal parts meadow hay, cornstalks and herd's grass *cut*, 110 lbs. Cob meal, 48 lbs. Water, 362 lbs. Milk, 110 lbs. Manure, 398 lbs.

Previous to the experiments, the cow was fed on cut fodder, with other stock. Eight days intervened between experiments Nos. 2 and 3, during which time, uncut or whole hay was used. Sixteen days intervened between Nos. 3 and 4, during which time, cut fodder was given. The water was weighed as drank, as also that with which the fodder was moistened. Hay weighed at commencement of each experiment, and fed regularly. All was eaten as fed out, except in experiment No. 4, during which 120 lbs. was placed before the cow, 10 lbs. refused, leaving 110 lbs. consumed; the milk weighed at each milking, and the manure daily. A thermometer was placed in the barn, indicating an average as above, but was not consulted during experiment No. 4, which ended about the last of March. The weight of cow, 890 lbs. An attempt to weigh the animal at the end of each period proved unsatisfactory, in consequence of food and water having been recently or more remotely taken. I regret that my purpose to *test the quality* of the milk was not carried out. Supposing the value of hay to be $14 and $7 per ton; cornstalks, $7; carrots, $8; and corn, 75 cents per bushel, the expense for six days—No. 1, $1 43; No. 2, $1 09; No. 3, $1 50; No. 4, 88 cents.

It is a practical point, of no small importance to those interested in the dairy, to ascertain the kinds and amount of fodder best calculated to afford the largest supply of milk. A knowledge also of the comparative amount of nutritious matter, in the various kinds of fodder used for feeding cattle, is all-important for the economical distribution of the products of the farm.

Westboro', *November* 17, 1846.

HAMPSHIRE, FRANKLIN AND HAMPDEN AGRICULTURAL SOCIETY.

This Society held its twenty-ninth anniversary at Northampton, on the 14th and 15th days of October last. The first day was devoted to the Exhibition of Stock, (excepting horses,) Domestic Manufactures, and the Ploughing Match. The Show of horses took place on the morning of the second day. At 11 o'clock, the annual address was delivered by John S. Skinner, Esq., of New York. The returns consist of the reports of committees, unaccompanied, however, by any statements from successful competitors. From the reports, the following selections are made.

Domestic Manufactures.

The spider is recorded as the first practical weaver; while the higher wisdom of Dame Eve, whose consciousness quickened her invention, entitles her, doubtless, to be regarded as the first seamstress. Had woman, at that early age—woman, to whose delicacy we are indebted for all those suggestions which contribute to the comfort and adornment of the person—studied the ingenious movements of the insect tribes; had her eye traced those delicate threadlets, shooting in gossamer webs from tree to tree, hanging their fairy veil over the running brook, and suspending their light tracery in the very air itself, she would not have resorted to the rude expedient of sewing together fig-leaves for garments. We intend no disparagement to her sex, when we compare her ingenuity to the instinct of an insect. She will have arrived to a perfection which the arts have never attained, when she has learned to weave the spider's web, or the "winding-sheet" where the silkworm dies; and it is not beneath the dignity of the noblest of our race, to draw lessons of wisdom, science, philosophy, and religion itself, from the humblest creature that creeps upon the earth.

The arts of spinning and weaving rank next in importance to agriculture, and probably have a more remote origin. Seventeen hundred years before Christ, Pharaoh arrayed himself in vestures of fine linen. In the earliest ages of the world, these employments were confined exclusively to the female portion of community; and, in the latter periods, they have been taken from their lawful hands only by the usurpations of mechanical force. They were regarded no less a useful, than an honorable employment for women; and our more immediate ancestors, whose hands did not disdain to twirl the spindle, or throw the shuttle, could have consoled themselves in the reflection, that theirs was a domestic occupation, in which women of rank in Egypt, in Tyre, and in Greece, did not hesitate to engage.

The distaff, and the needle, were the badges of her industry, and her honor. So sacred was this former implement of female industry held, that it is represented by the writers of antiquity as a gift of the gods. Minerva, in the mythological narrative, was regarded as the goddess of all the liberal arts; and she was invoked by every artist, and, particularly, such as worked in wood, embroidery, painting, and sculpture. In most of her statues, she is represented as arrayed in a variegated veil, and holding in her right hand a distaff. In those inimitable pictures of domestic life, drawn by the immortal Homer, we find the lady of the mansion superintending the labors of the servants, and using the distaff herself. Her spindle was made of the most precious material, richly ornamented; her beautiful work-basket was of the most exquisite workmanship, and her wool was dyed in some rich, bright hue, which made it the pride and glory of the highest dames of rank and fortune to work it into useful or ornamental textures. The most beautiful woman of her age, the Spartan Helen, was not more famed for beauty, than for her skill in embroidery, and every species of ornamental work. In honor to her industrial skill, the Queen of Egypt presented her with a golden distaff.

With the ancients, labor, *manufacture*, the work of the living *hand*, for this is what the word means, was made no less a duty, than a pleasure. It was not abandoned to the poor, or made the badge of servility. So sacred was useful employment held, that the idle woman was deemed the abandoned woman; and we may venture to lay it down as a truth deeply implanted in our nature, and exemplified in the history of our race, that the unemployed hand hangs by the side of the corrupt heart. It is a saying, as true as it is old, that "we need employment to keep us out of mischief."

The fact that the refinements of life, and sentiments of religion and morality, are intimately connected with the useful occupation of the mind and the hand, is one not to be overlooked by those who would make female employment respected and honorable. Ingenious invention strongly taxes the intellect; and the cultivation of a refined taste in the useful arts, and a fondness for all those beautiful imitations of nature which may be wrought by the skilful exercise of the needle, stand among the prime requisites in the formation of a virtuous character.

Your Committee must not be regarded, in these remarks, as regretting "the good old days of Adam and Eve," or as wishing to reproduce, in this generation, the familiar and homely employments of our New England great-grandmothers. We have no wish to revive the ancient reign of the distaff and the spindle, in the economy of the household. Happily, the modern inventions and improvements in mechanism have superseded the necessity of calling upon the ladies of the present day to supply the demand for the coarser and heavier fabrics; and we would as soon wish to see, in our public conveyances, the railroad car exchanged for the stage-coach, as to see the machinery of the factory replaced by the cumbrous loom and spinning-wheel of the household. As strongly as we may advocate the labor of the female hand, we can point out a thousand other channels, in which to direct its activity. The fancy still teems with innumerable conceptions, as yet unrealized; and the achievements of the needle have, as yet, found no limit.

The entry of articles, this year, is very small, compared with other occasions of this kind, and embraces a less variety than usual. The substantial, and more useful articles prevailed over those merely ornamental. Many specimens exhibited evidence of great patience and perseverance in their manufacture; and the fact that some of these articles, which required the most labor, were made by persons in the extremes of life—the first and second childhood—induces the committee to bestow upon them the highest measure of commendation.

In the department of fine broadcloths, there was no competition. The agent of the Northampton Woollen Mills, Mr. Musgrave, made the only entry of this quality of cloth, and exhibited four specimens of fine and superior manufacture. One piece of black broadcloth particularly excited the admiration of the committee, as possessing a beautiful texture, with a face of superior lustre. These cloths received the first premium, as among the best specimens of American manufacture, at the late Exhibitions in New York.

There was a large entry of undressed flannels, of counterpanes, and bed-quilts. A pair of woollen blankets, by Mrs. Almon B. Ludden, of Westhampton, with the corners embroidered with tasteful worsted work, were, without exception, the most beautiful specimens of the kind ever presented to the judgment of the Committee.

Dr. Stebbins, of Northampton, presented one card of cocoons, of which he raised sixty-five pounds in the year 1846; also specimens, from A. P. Van Eppes, of ninety pounds of cocoons, in circular enclosures, raised at his own cocoonery, in Northampton; also a specimen of ten pounds very superior reeled silk. Mrs. Sophia Wright presented one pair of silk hose, from the waste of perforated cocoons.

Specimens of fine scythe-stone, from a quarry in Cummington, were exhibited by E. Jordon, of that place. This is a new and excellent article; never in the market until the present year. The grain is very fine, pure and soft, and of active grit. The examples were mostly got out, and worked with superior shape and finish.

A Yankee turbine water-wheel was introduced by Hiram Munger, of Springfield. This is a new invention of his own, and is spoken of in terms of the highest praise by mechanics who are best acquainted with its qualifications. It is capable of any extent of power, from one-horse power to fifty.

WILLIAM O. GORHAM, *Chairman.*

BUTTER AND CHEESE.

The Committee believe they shall but assert the unanimous opinion of this Society, and of very many in the community, when they say that there are but very few interests of greater importance, in conducting the farm, than the management of the dairy. Probably there is no branch of husbandry, in which skill and care are more directly beneficial and important than in this. Nearly every individual in the entire community is daily more or less affected by good or bad management in the making of butter and cheese.

It is very true that the towns within the limits of the Society are not so largely engaged in producing these articles as some others; and none of them, perhaps, can with propriety be called dairy towns. Yet the amount made here is by no means inconsiderable. According to the statistics for the year 1844, collected and returned, by the assessors of the several towns, to the secretary of the Commonwealth, it appears, there were made in that year, in Hampshire and Franklin counties, about twenty-four pounds of butter to each inhabitant, which is more than double the quantity made in the State as a whole. The quantity made in Hampden is somewhat less to each inhabitant, although West Springfield, in that county, according to the returns before named, made a larger quantity than any other town in the State, with the exception of Sheffield, in Berkshire county. The town of Worcester, in Worcester county, stands the third in the quantity of butter made, and Amherst, in Hampshire county, fourth.

To show, in few words, the importance, in a pecuniary point of view, of the products of the dairy throughout the State, as compared with other articles produced by the farmer, it may be necessary only to state that, taking the statistics before alluded to as a basis of calculation, the value of butter alone, made in 1844, was nearly double that of all the sheep then in the State. It also exceeded swine, in value; as it did also the aggregate value of wheat, rye, barley, buckwheat and oats, raised during the year.

But, notwithstanding the importance of this branch of husbandry to farmers themselves, and the direct interest also which every other class of the community have in it, it is a well-known fact, that much of our butter and cheese is of an inferior quality, which can, and should be, very greatly improved. The late increased exportation of these articles from this country to England, by bringing them in competition with superior articles, will, we believe, have a very favorable effect in directing attention to them, and improving their quality at home. It has been remarked, by those who have had good advantages for judging, that the inferior quality of much American butter and cheese is principally owing to a prevailing custom of having no fixed rules in making them. The Yankees are proverbial for "guessing," and they are greatly inclined to exercise this kind of skill in determining the quantities of ingredients which are to compose their dairy products. It is said, that, in the best managed dairies in this country, and especially in England, the cheese, for instance, from any one of them, is very nearly of a uniform quality, while, in others of less note, it varies from that mellow and rich, through intermediate grades, down to that which, so far as hardness and toughness are concerned, may, without much poetry, be called, "white oak cheese."

Messrs. Gaylord and Tucker, in their able work, entitled "American Husbandry," maintain, that, to the neglect of two things, quality of the rennet and proper temperature of the milk, most of the defects in our cheese are owing. It is said to be a well-ascertained fact, that not far from one ounce of pure rock salt is the proper quantity to incorporate with a pound of butter, and that, in setting milk for cheese, the proper temperature is from 85 to 95 deg.; below or above which, the quality is greatly injured. And yet, but few, comparatively, have any rules or uniform practice in any of these matters.

The Committee regret that no detailed statement of the manner of making accompanied any of the several lots presented, either of butter or cheese. True, the several samples spoke for themselves, and most of them spoke well; but they spoke to very few, and even to them gave no information how their excellences might be imitated. The mother, wife or daughter, who succeeds in making these important articles of a superior quality, and then improves an opportunity like the present, to spread abroad the process by which she succeeded, has done an act worthy of high commendation and conferred an important benefit upon the community.

BUTTER.

To Mrs. Mather Warren, of Williamsburgh, 1st premium,	$3
" R. T. Thayer, of Buckland, 2d premium,	2
" West Tilton, of Goshen, 3d "	1
Miss Caroline Dickinson, of Hadley, gratuity,	1

CHEESE.

To West Tilton, of Goshen, 1st premium,	3
" Mrs. Martha Strong, of Williamsburgh, 2d premium,	2
" William Tilton, of Goshen, 3d premium,	1

SAMUEL NASH, *Chairman.*

STOCK.

The recurrence of the annual agricultural festival, agreeable as it always is, presents, on the present occasion, at least one feature which, though not entirely new, has assumed a much larger development than it has hitherto done—this is, the number and excellence of the working cattle. Their presence added very much to the interest of the meeting, as was apparent from the satisfaction generally expressed; and those towns which sent them are entitled to the marked acknowledgments of the Society and the public for their spirited exertions. Their individual effort has afforded satisfactory proof, that, if similar exertions were generally made, the annual show of cattle of this Society would be second to no other in the Commonwealth, either in magnitude or value.

The Committee are more than ever impressed with the beneficial influence of meetings like the present. The friendly congregation of men, all more or less engaged in agriculture, and united in the fraternal bond of a common effort to bring to the highest perfection those creatures which a beneficent Providence has subjected to the use of man, cannot be unattended with good results. The times in which we live are eminently prolific of new theories in the science of agriculture; and it is of the greatest importance, that, as they severally come under the test of practical trial, the results should be made public for the benefit of the community. Emulation is the germ of improvement, but it is a noble plant and wants elbow room; it requires a generous soil to fructify it; if it be cramped in its growth by too cold and sordid calculation of probable pecuniary advantage, it will wither and die a premature death.

It may appear superfluous, if not pragmatical, to utter so trite a maxim as that "the best things are always the cheapest;" but it is important that this truth should be ever prominent in the mind of the farmer, otherwise false notions of economy will spring up, and a rapid deterioration of breed, fatal to excellence, will be the inevitable result.

Paoli Lathrop's bull, of the pure short-horned breed, attracted the admiration of the Committee for his general perfection; there did not appear to be a faulty part about him; he may favorably compare with any of his kind in the country.

There were 97 pair of working cattle on the ground, of which 27 pair were sent by the town of Goshen. These took the first premium of $20. Easthampton furnished 23 pair, and received the second premium of $18. Hadley sent 27 pair, and the third premium of $15 was awarded to them; but the Committee have recommended that a gratuity of $1 be given on each pair of cattle, for the trouble of bringing them. The exhibition of teams surpassed in excellence any that has been witnessed since the formation of the Society. The symmetry of the cattle, and the nice discrimination with which the pairs were matched, called for the high commendation of the Committee.

There were eight entries of three year old steers. The pair from Norwich, owned and driven by Mr. Pitcher, were of extraordinary size and great symmetrical beauty. They weighed, in

March last, 2900 lbs., and the owner estimates that they have since increased 400 lbs. There were six yoke of fat cattle, but not equal in excellence to those shown at some previous exhibitions.

JOHN EDEN, *Chairman.*

On Ploughing.

The object of the ploughing-match is to exhibit, for public benefit, the comparative excellence of our best ploughs and ploughmen; not to try the strength or speed of teams, but to excite a commendable spirit of emulation and improvement in the construction of the plough. Sixteen horse-teams were entered as competitors. One eighth of an acre was to be ploughed, and by a furrow at least six inches in depth. The work was done well as a whole. In some of the work, the furrow was not laid as smooth as it should be, and though all the lands were ploughed to the depth required, yet there was a difference in their depth.

The Committee would recommend deep ploughing. By such a mode of doing the work, a deeper soil is made, with a capacity to absorb and retain more moisture than soils with shallow ploughing. Lands most productive, and least liable to exhaustion from crops, and least exposed to suffer by drought, are the deep ploughed lands. This has been found to be true in Europe as well as in this country.

The Committee would suggest the utility of a trial of ploughs of different construction; not only such as are fitted for a smooth turf soil and surface, but also such as are suited to a rough, uneven soil, stalk lands and rugged surface, as much of the land within our limits, and such as is ploughed, is of that character.

The thorough well-performed operation of the plough constitutes the first section in the corn laws of the farmer. Whatever amendments may be made in the chapter, this section can never be repealed. In this respect, the sober, intelligent, industrious and successful farmer has the advantage of State officers, cabinet councillors and political managers. These have been engaged, for centuries, in devising rules by which their corn laws should be regulated, varying and changing to meet the real or supposed state of the markets, causing plenty or scarcity as the chance policy of such a system must always do. The farmer holds on his way by steady steps, regarding a system of laws established and carried forward by a lawgiver whose laws do not change to meet the varying, selfish, short-sighted views of politicians. The farmer's code is not only stable, but is based on the sure and certain promise, that he who tilleth his land shall have plenty of bread. In this promise, he puts his confidence. His duty is to regard it, his custom to practise in conformity to it, and his protection is in its fulfilment.

M. DOOLITTLE, *Chairman.*

Fruits and Vegetables.

The Committee notice, with much pleasure, an increased and growing interest in this subject. Every man is more or less interested in the raising of fruit; every body eats it, every body likes it; and, since the best fruit requires no more labor in its production than the poorest, every man has only to decide for himself whether what he raises shall be good or poor. The raising of fruit is a source of profit more sure and permanent than many crops that are constantly cultivated. Many persons seem unwilling to believe that the product of a single fruit tree often equals that of two, three or four acres of corn. The time has come when premiums should be offered by the Society and awarded to new sorts of fruit, to the finest specimens of those already known, to the best collections of vegetables, and to the most beautiful displays of flowers. If this suggestion were carried out, we confidently anticipate, that from this fertile valley we should have, every year, one of the finest exhibitions of fruits which could be found in New England.

C. A. HALL, *Chairman.*

HAMPDEN COUNTY AGRICULTURAL SOCIETY.

In the remarks accompanying the returns of this Society, it is said, "the third Exhibition of this Society has proved highly successful. In all the substantial and important departments, it presented a marked improvement upon either of the former Fairs, and unmistakable tokens were given, that the interest in, and influences of, the Society are rapidly extending throughout the county. Some of the best animals in the field were from the mountains of Chester, and they took the premiums from the towns here in the valley of the Connecticut. The two days of exhibition passed off pleasantly and profitably.

"In reference to farming, there are two things of crowning importance, which, well carried out, will advance the interests of agriculture amongst us incalculably, and without which, the work contemplated by the Society, in its establishment, must remain unfinished. The *first* is a survey of the county, on the basis of agricultural chemistry. An examination of the soil, to ascertain its characteristics and peculiarities, its adaptedness to particular manures, and its general capabilities, is a desideratum that ought not to be postponed. The earth, the soil, is the great instrumentality of the farmer; an accurate knowledge of it is as important to him, as such a knowledge of iron is to him who works in iron, or of wood to him who works in wood. For the want of this knowledge, how inefficient and incomplete is the cultivation of the soil, and how much manure is every year wasted and misapplied! An analysis of soils should be entered upon as one of the leading objects of the Society, not to be lost sight of by any consideration. It lies at the foundation of the farmer's success.

"The *other* object, is the offering of suitable premiums for farms under the best management and cultivation, with a view to extent, value and economy. Premiums of this kind have been annually offered by the Society, but they have not been such as to attract the notice of farmers, or to warrant such an examination as should be given in the award. A hundred, or a hundred and fifty dollars, distributed annually for this purpose, would be most beneficent in its consequences. Should the competition be large, farmers, who strive for such premiums, would feel themselves amply compensated, even if they failed to obtain them, by the increased value and improvement of their farms induced by the effort. In connection with this is the employment of a supervisor, to go through the Society's limits, to examine and report upon the progress of agricultural improvement, thus bringing into one view the wisdom of the best and most experienced cultivators."

Ploughing Match.

There is no part of the proceedings at the Annual Cattle Show and Fair, from which the farmers derive more useful, practical instruction, than from the ploughing match. And yet those who enter this field as competitors, do not seem to derive from it advantages equal with those who strive for premiums for agricultural products. If premiums are awarded for these products, or for articles of manufacture, the owner is able, from that fact, to dispose of the premium article at a price rather in advance of the regular market; or, if he fail of a premium, the exhibit secures for it a ready sale. But the competitor in ploughing, if successful, gains the premium only, and if unsuccessful, sustains the entire loss of time and labor expended.

Making proper allowance for the unfavorable condition of the ground, it is believed that the work was never better performed on any similar occasion. The Committee have no hesitation in saying, that all was well done; but so trifling is the shade of difference between the work of the several sections, that they cannot come to any satisfactory conclusion which is best, much less, to settle the six degrees of difference which the regulations require. In this perplexed condition, the Committee devised an expedient, for their relief, which they hope will meet the approbation of the Society, and be satisfactory to all competitors.

They have paid to the Treasurer a sum which, with the premiums allowed by the Society, is equal to seven premiums of the first class, and now proceed to award to each of the competitors, Benjamin Belcher, Horace Smith, Justin Ely, Richard Bagg, Jr., Samuel Warner, Walter Cooley, and Justus Bagg, a first premium of seven dollars.

JOHN MILLS, *Chairman.*

WORKING OXEN.

Sixty-six pairs of working oxen were exhibited. This number is less than it was last year, but the specimens of the oxen of this year are far superior to those of the last. This opinion is made up from the general appearance of the animals, without any other test of its correctness than is made by the eye. We judge of their qualities as working cattle, from their symmetry of form and proportions, their being well mated, their size, their apparent strength and adaptation to perform labor. The Committee did not find an inferior or imperfect pair of oxen on the ground, or a single ox who could not stand erect in praise of the New England farmer.

Opinions made up from mere external appearances may be deceptive, and often lead to error. We are called upon to judge of the merits of working oxen from the mere outward appearance, when the real proof, and the best evidence of their competency to perform labor and endure fatigue in the business of the farmer, may be beyond our reach. In view of this matter, the Committee suggest whether it would not be well, in future exhibitions, to have such arrangements made that the qualities and capacities of working oxen should be tried, in the performance of some labor.

HEMAN DAY, *Chairman.*

MILCH COWS.

The whole number exhibited is twelve. All the competitors, except two, have failed to comply with the rules of the Society.

The first premium, of $4 and Washington's Letters on Agriculture, is awarded to Hon. John Howard, of Springfield, for cow No. 4. This cow is a full-blooded Durham; her average of milk during the required period in June, [from the 10th to 20th] was over fifty pounds daily—in September, [from 10th to 20th] her average was over thirty pounds. She has been kept on grass alone. The other regular premium, $2 and Washington's Letters, is awarded to Benjamin Willard, of West Springfield, for cow No. 3. The Committee infer, from the certificate, that this cow is half Durham. Her average of milk, in June, was forty-five pounds; in September, thirty-five pounds.

In awarding these premiums, regard has been had to the fact of compliance with the rules. In awarding those now to be stated, a gradation has been observed, so as not to make a departure from, or neglect of, the rules a matter of indifference. A premium of $3 is awarded to James Bagg, of West Springfield, for cow No. 1. This is a native cow; the certificate gives the quantity of milk for *July* and September; the quantity in June could not be given, as the cow calved on the 19th of that month. Her average of milk in July was 42½ lbs. daily, and, in September, over 30 lbs. A part of the season she had two quarts of shorts or bran daily, and, recently, pumpkins twice a day, besides pasture.

A gratuity, Washington's Letters, is awarded to Harvey Butler, of Springfield, for cow No. 6, deemed by the Committee to be a very good one. A gratuity, $1 50, to James Willis, of Springfield, for cow No. 5, a very good one. Also, to John F. Crooks, of Longmeadow, for cow No. 8, of the same character, partly Durham.

Nos. 9 and 10 are two cows entered by J. O. Brownell, of Springfield. No. 9 is partly Durham, and gave, in June, 58 lbs. of milk daily during the period required, and is a valuable cow. No. 10 is a fine animal, half Durham and half Ayrshire; she gave, from July 30th to August 10th, 45 lbs. of milk daily. The Committee give a preference to this cow over No. 9, and award, for both, $2 and Washington's Letters.

The Committee cannot but express their regret, that there should be so much reluctance at bringing the best cows to this annual exhibition. Farmers seem unwilling, except in the immediate vicinity, to show what they have. There are very many excellent cows throughout the county of Hampden; and the number has been for many years increasing from year to year. They are principally, as far as can be ascertained, natives; but there is also, in various parts of the county, an admixture of foreign blood. This is, for the most part, the Durham and the Ayrshire. The Durhams are the largest and handsomest animals, excellent for milk, and the most profitable for the butcher. The Ayrshire is a small cow; very hardy, more so than the Durham; able to endure our severest winters; and adapting herself well to the feed of our Northern pastures. In milking qualities, the Ayrshire excels the Durham, ranking with the best breeds, if not the superior of all.

There are known to the Committee many first-rate milch cows of the native breed; and it would be gratifying to them to be able to give some account of the best of them, if they had the means. There is a cow at West Springfield, which has, the past season, furnished 19½ lbs. of butter from a week's milking. This cow's day of usefulness, unfortunately, is regarded as past. There is a breed of native cows known generally as the Morris breed, from the fact that Judge Morris originally placed his probate upon it; and a long line of descendants have, with remarkable uniformity, kept true to the record. Several beautiful specimens of this stock have been in the field at this show. This breed is remarkable for the steady transmission of its good qualities. It is greatly to be desired that, whenever an uncommon animal or breed is found in any part of the county, farmers would take the pains to send an account to the Secretary of the Society, to be placed on its files.

It is believed that sufficient attention is not given to the feeding of the cow, nor to the early training of its young. So valuable, so productive is this animal, that no pains should be spared to insure perfect fidelity in these respects. Common pasturage in the summer, and dry fodder in the winter, are very apt to make up the account current. Nor is the true comfort of this animal consulted in all cases, as it should be, during the severity of winter. The consequence of all this is, the income is largely diminished. It should always be borne in mind, that the warmer, or rather the more comfortably, the animal is kept, the less fodder is required for its support. Regular feeding, and regular and thorough milking, are indispensable to enable the cow to do justice to herself and to her master. It is the remark of the owner of the famous Cramp cow, in England, which stands at the head of the race, that "milch cows are often spoiled for want of patience at the latter end of milking them." We have an account of a cow which was raised and kept in this State, which gave, during so cold a month as January, an average of more than 18 quarts a day. She was fed on three pecks of sugar-beets and carrots daily, with good hay, and in the coldest weather a bucket of warm water with a quart of shorts in it.

The practice of soiling, or feeding with green fodder, is introduced, to some extent, among us, and may safely be recommended, especially where good hill pasturing is not abundant. A judicious and watchful agriculturalist has kept a valuable cow in this way during the past season; and has cut over only about a quarter of an acre for the purpose. It is estimated that the same quantity of land which would keep three cows soiled, will, as pasturing, keep but one. Very much remains to be done in order to give high perfection to this, *the animal* of all others for the farmer. Some farmers in the Eastern part of the State are in the habit of giving their cows a blanket, and find their account in it. Though much has already been accomplished, the subject must be commended to the continued and close attention of our agricultural community.

W. B. CALHOUN, *Chairman.*

Benjamin Willard's Statement.

Of my two cows, the first is named Orange, from the peculiar color and rich quality of her milk. She averaged 25 lbs. at night during the month of June, and 20 lbs. in the morning. She shrinks more than some cows on ordinary feed, but never to a small mess, even to her calving. It is hard to dry her. She is 12 years old, and has had ten calves. "Lady Rowe" I bought at a week old, April, 1841. She is from one of the best of cows. She brought a very fine heifer calf last April, and, with no other feed than the pasture, she gave, from the 10th to 20th June, over 45 lbs. per day; her milk in September would average ten pounds less. It is about the same *now*. She has the property of great uniformity, and holds out well. For stock, I esteem her unsurpassed by any native cow of my acquaintance. Such is her natural docility, and the ease in training, that I could not wish one more pleasant to handle or to milk. Last year, I kept her up during the summer, and she did quite as well, and ate any thing I gave her. I could greatly increase her milk by meal and thrice milking, but I prefer to keep that for winter, when I shall make butter.

I have learned one thing of no small importance to me, that though we cannot be certain, from our best milkers, of obtaining a cow equally good from their *heifer* calves, yet, as they transmit their milking properties to their bull calves, by observing this law of nature, we may avail ourselves of a measure to preserve what is so desirable, with an almost infallible certainty. On this account I have raised, and offer, Prince Orange, from which to raise cows for the dairy.

Another thing I have noticed, that the very largest bull *calves* are sometimes selected to be kept, and often have I witnessed the difficulty, if not impossibility, of calving,—with great injury to, or even the loss of, cow and calf. As to keeping calves, especially from our best cows, the gain in their quietness and flesh, and sound teats, in taking them off, pays well for the labor of milking; and the advantage to the calf of early restraint, in handling, and especially learning him to feed summer soiling, is of high consideration ever after.

Ireland, October 6th, 1846.

Fruits and Flowers.

The Committee are pleased to see this important branch of husbandry receiving that attention it so richly deserves. It is quite recently that any extraordinary exertion has been made to introduce any other than the more common fruits in this vicinity, and, at this time, most of the choice varieties, with the exception of apples, are confined to the garden of the amateur, and, of course, not to be obtained by the mass of the people.

The past has, in many respects, been a season of very singular aspect. Opening, as it did, a fortnight earlier than usual, many predicted an early frost; but, after a summer of intense heat, we arrived at the 3d October without a frost to injure any plant, and now hear of fruit of many kinds blossoming and putting forth their foliage anew. However pleasing this may appear to the eye of the young and inexperienced, the practical gardener will view it as an effort of nature to produce beyond its powers.

In the flower department, the most careless observer cannot fail to see an increase in the varieties. Almost every house has its flower garden, and every window a favorite plant; and this it is, which gives to our shire town that pleasant aspect so often brought to our minds in the periodicals of the day.

Of the small fruits, there was the usual supply of currants and gooseberries, although this latter fruit, so highly esteemed in England, is but little cultivated in this section of our country; this may in part be attributed to its liability to blight and mildew. The strawberry was very generally injured by the winter's ice. Some of the Committee attribute the loss of plants to a small black beetle, very shy and quick in its movements. These insects devoured the leaves of the plant in early spring. This was more particularly observed when the plants received protection during the winter with manure.

Plums set for a great crop; but the usual indefatigable enemy, the curculio, having taken its share, the residue very generally decayed on the tree. The season has been very favorable for the vine, having been both warm and moist, in the early stages of the vine's growth. The Committee would recommend the cultivation of this fruit to the public, if they can have the patience to watch over and train the vine. No other tree will produce the same weight of fruit upon the same land, as this; and when we take into consideration its longevity, and its certainty of producing every year, it seems to the Committee, that the only disease to which the grape is subject (the mildew,) may be guarded against.

But the apple is the fruit of New England, and of the early varieties there was a plenty, and generally of good quality. There is much complaint, that the winter fruit drops from the trees; and it is feared, that the early maturity may have a tendency to shorten its duration the coming winter. Some orchards in the northeast part of the county were injured by hail, and the Committee would mention that they do not recollect a season when so much hail has fallen as in the present. Heavy hail storms occurred in the northeast part of Springfield on the 20th and the 23d of June, and on the 26th of July.

D. M. BRYANT, *Chairman.*

Reclaimed Swamp Lands.

The Directors say, two claims have been presented, and the first premium has been awarded to T. K. D'Wolf, of Chester. The other applicant is Joel Tucker, of Monson, whose statement was not received seasonably, and is wanting in one of the requisites for premium, a "detail of all incidental expenses." Mr. Tucker has done an excellent work in this way, having reclaimed a miry swamp, by ditching, &c., so that he has, the present season, cut two tons of good hay to the acre, besides a second crop on part of it. Four years ago, it produced nothing of any value.

T. K. D'Wolf's Statement.

The piece of land I offer for premium contains 12 acres and 9 rods. To describe its appearance at the time I purchased, (1838,) is impossible,—full of bushes, large pine stumps, old logs, roots, bogs and brakes, mire holes and deep pits, swarms of frogs, serpents and lizards,—it was literally a den of "creeping things." One man in Chester (a poor man) had opened the door to this bedlam, and, for many years, had the entire control of the wild grass, which he carried out on poles, and paid annually $3. This lot lies concave. The depression, or swampy portion, contains about six acres; its sides or upland were full of knolls and depressions, with briars, bushes, old logs and large stones (boulders,) the most of them so large that they could not be removed without blasting, and some from eight to ten feet in diameter.

In the summer of 1839, I employed two Irishmen, and commenced ditching. I put a large centre ditch from north to south, and cross-ditches from the centre, east and west, to the more elevated portions. The muck, in some portions of the centre ditch, is from 6 to 8 feet deep, and gradually lessens as it approaches the upland. The bottom is a blue clay and white sand. After cutting the centre ditch, I employed four men with scythes, bush-hooks and axes, to cut off the grass and bushes, requiring them to put all the bushes into heaps, and the grass was taken off on poles, equal to two tons of good hay. The expense of cutting and piling the brush, and getting the hay, was 45 days' work, for which I paid $45. After my cross-ditches were cut, I set fire to the heaps of brush, and in less than two hours the whole lot presented one black, smoking surface, and for the first time, probably, within the knowledge of man, it was thrown open to the full influence of the sun.

How it was possible, with any means I possessed, to remove the hundreds of stumps, (and most of them large pine,) the countless number of old logs, to fill up the great cavities, to remove the bogs, to dispose of the great rocks upon the upland, I could not conceive. It had always been a principle with me never to look back; but then, this enterprise had been undertaken against the advice of some of my best friends; first, because it was impracticable, and secondly, because, from my early youth, I had not been engaged in agricultural pursuits, and must be ignorant, of course, of the best manner of conducting the business. I was resolved, however, to go ahead, and this was one of the best resolutions of my life. As I moved forward, I soon found these mountains were molehills, and that many of these "insurmountables" were the exact materials I wanted in the completion of my object. The rocks and small stones upon the upland would make me a bold and durable fence, the bogs would fill up the mire holes in the mucky portions, and also the cavities in the upland, after removing the smaller rocks. The large amount of muck thrown from the ditches was just the thing for the upland, giving me an abundance of manure. The pine stumps and logs furnished a good quality of stove wood, for which I had been paying $1 50 and $2 per cord, and, most of all, my friends had become convinced of the practicability of the operation, and that, too, in my hands.

The lot now presents a smooth surface, with the exception of some large stones on the upland. Every rod in the lot can be ploughed with an ox team. Most of the upland has been ploughed and cultivated with crops of wheat, corn, oats and potatoes. More than two thirds of the mucky portion has been ploughed, made clean as a garden, cultivated with potatoes and oats, and seeded with herd's grass and clover. In seeding these portions, I am in the habit of giving a liberal top-dressing of horse manure, (which, I believe, is preferable,) say 25 cartloads to the acre, mixing it well by thorough harrowing. The portions which have not been ploughed have a smooth surface, and give me from one to two tons per acre of good stock hay, foul meadow, blue joint, and a tall native grass which resembles very much a large growth of red-top. I have been in the habit of taking up every year more or less for potatoes, with a view to clean the land, and the next season would put on oats and seed down. In seeding with oats, I have invariably lost much of my crop from the great growth of straw, being down and not well filled. The last year I adopted the "new system" from the Massachusetts Ploughman, and, in the month of August, after taking off the usual amount of the grass I have described, I took up a piece by ploughing and dragging thoroughly, cleaned it, gave the top-dressing, put in the seed, (timothy and red-top,) ay a half bushel of the former to three pecks of the latter, and the present season I took from it the best crop of grass I ever saw. I intend, therefore, to complete my job in that way, the object being to clean the land and change the quality of the grass.

I opened an account with my lot when I commenced, charging every day's work, every load of manure, every bushel of seed, &c. I gave credit, as I passed along, for all the crops I took from it, including wood, &c.; and, at the end of four years, it had paid principal and interest of the amount expended, (over $300,) and brought me in debt about $15. Since that time, I have made no estimate of the expense or profits, until the present season, and now only with a view to this statement.

The net profits of my lot, then, the present season, are as follows:—

25 tons of hay at $8 per ton, - - - - - -		$200
Deduct 16 days' labor at $1 per day, - -	$16	
" " " boy, 50c. per day, -	8	
" 32 days' board at $1 50 per week,	7	
" use of oxen and tools, - - -	2	
	—	33
Net balance, - - - - - - - - -		$167

Chester, *October* 8*th*, 1846.

Reclaiming Waste Land.

The Committee are deeply impressed with the importance of this subject, and especially from the fact that, in their opinion, it is the thing on which rests the agricultural interests of Massachusetts. We now speak of upland, which is cultivated every year; and land, too, which belongs to the home-farm, in the face of every body, producing less and less, and presenting a pale and sickly appearance, the rocks and smaller stones, scattered promiscuously, occupying a large portion of the surface, while their proper place presents an appearance, if possible, still worse—a mass of nettles and sour weeds, propped up by elder bushes, and a few fragments of feeble rails. Here is waste land indeed! Once a beautiful forest of tall maples, oaks beeches, pines, chesnuts and hickory, furnishing ample evidence of the rich and abundant resources of the soil, and beckoning the honest axe-men of New England to come and share its bounteous gifts, promising, and possessing the means of performing abundantly, rich harvests to them, and their children, and their children's children, under the influence of fair and thorough culture.

How then is it, that all these resources are exhausted? that, instead of a great harvest, we find a mere pittance? The simple truth is proclaimed, through your Committee, to-day, that what has been may be, and shall be, if you will reclaim your waste land. It directs you to break up your rocks, to clean your hedges, put the rocks and small stones into a good wall, bring up from your swamps and low grounds those rich deposits, which have been collecting from generation to generation, waiting to serve you; and prove yourselves good men and true, by not withholding just wages from the laborer. For many years, your farms (these lands) have filled your storehouses; and what have they received in return? Nothing! comparatively nothing.

The Committee have no fellowship with the too prevalent opinion, that the farmer must add farm to farm, if he would stand strong in dollars and cents. No doctrine is more prejudicial to agricultural interests. In this county, it startles no one to learn that many of our hill farmers possess four and five hundred acres; nor are they more surprised that the poor man can hardly live at that. In the opinion of the Committee, every acre the farmer possesses, which he cannot cultivate well, is a curse to him and a trespass on the interests of the Commonwealth. It encourages the silly idea of "going west"—drives her citizens into other States—robs her of the benefit of their labor and impoverishes her soil.

T. K. D'WOLF, *Chairman.*

BERKSHIRE COUNTY AGRICULTURAL SOCIETY.

This Society held its thirty-sixth anniversary on the 7th and 8th days of October, 1846.

The number of persons in attendance was much greater than usual. The newly-opened rail-road, from Pittsfield to North Adams, brought down thousands of visitors from the valley of the Hoosic, and the shades of Greylock. To the spectator, the live stock appeared superior, in variety and quality. The display of domestic fabrics has never been surpassed. The number of articles exhibited was four hundred and sixty—one hundred more than on any former occasion. The ploughing match took place on the morning of the 8th. The vast concourse of people that overlooked the field of strife showed that the interest was all revived, that has ever attended our ploughing matches. The annual address was delivered by John Stanton Gould, Esq., of Stockport, N. Y. The reports of the several Committees were read, and the award of premiums declared by the Secretary. The premiums were delivered, to the successful competitors, by the Treasurer of the Society.

The following selections are made from the Reports. There are no statements accompanying the returns.

AGRICULTURAL PRODUCTS.

We have, in the prosecution of our labors, had the most satisfactory evidence that the efforts of this Society have not been in vain, but that they are fast accomplishing the ends to which they have, for more than thirty years, been directed. This evidence has been presented to us in various forms. It has appeared in the increasing interest manifested by the farmers generally, in increasing the quantity and improving the quality of manure. This work is most successfully accomplished by mixing the different kinds of manure which accumulate in the yards and about the buildings of every farmer, and by composting this with the wash of the roads, or with the muck from the marsh, by which process the fluids are absorbed, and thus become most powerful auxiliaries in perfecting this great work.

We find another evidence of the good influence of this Society, (although its influence in this may be considered indirect,) in the visible improvements in the dwellings, and, perhaps, more especially in the barns and other outbuildings of the farmer,—showing most conclusively, that they not only have a regard for their own comfort and convenience and that of their families, but also for that of their flocks and herds, for which Berkshire county is becoming so much distinguished.

We can speak most favorably, also, of the general neatness of appearance and judicious management of most of the farms that we were called to visit; but, in some instances, we found a luxuriant growth of weeds and bushes, which, we think, should be removed and give place for other productions more profitable to the owner, and more beautiful to the beholder.

We believe, also, the influence of this Society is fast tending to the removal of the dishonor (if any has ever existed) attached to the agricultural pursuit, and that the old adage is fast gaining favor in this community, that—

> " He that by the plough would thrive,
> Himself must either hold or drive."

For, in most instances where we were called to examine crops, the owner was most diligently engaged in the labor of the field, either in promoting the growth of the crops then in the process of maturing, or in harvesting and securing those already matured. This truth is not only applicable to those in the humble walks of life, but to some of those also who have been called by your suffrages to represent you in the public councils, thus showing that the intellect, which has been honorably employed in devising laws for the State, may, without incurring reproach, successfully guide the hands in the cultivation of the soil.

The number of crops entered for premium, we believe to be without a parallel in the history of this Society's proceedings. They numbered one hundred and sixty-one; and, in addition to this, there were seven entered of orchards, and three of dairies, which swells the number of entries, which demanded our attention, to one hundred and seventy-one. Of this number, six were winter wheat. This crop, we think, has fallen far short, in production, of that reported by your Committee the last year, although the crops which were entered for premium were good, and will yield to the grower a fair compensation for his labor. The depredations of the insect, which has for a number of years been the death of the wheat-grower, are still visible in a small degree, but we entertain the hope that the time is not far distant when they shall no longer be known among us. We believe that the cultivation of this crop should still be encouraged by this Society, although it cannot be so generally cultivated with success as the spring variety. Of this we found a most luxuriant growth, but, at the time of viewing, it was not sufficiently matured to enable us to judge with any degree of certainty of the production. We believe, however, that the result was favorable; and if so, we hesitate not to say, that the crop of spring wheat has not been better in this county for many years, if ever. That mostly cultivated in this county is the Black Sea variety. Its production is said to be abundant; but the quality of the flour it yields is generally admitted to be inferior to that of the other varieties grown in this county. Still, we hesitate not to recommend its cultivation by the farmers generally, and believe that they need not, and should not, depend on the farmers of the West to supply them with the wheat they need for their own consumption.

The number of crops of this variety entered for premium was twenty-five. They were all good, and many of them so nearly equal in merit, that it was with much difficulty that we could decide who should become the successful competitors.

The growth of winter rye, perhaps, was rarely if ever better, but its filling in many cases appeared quite deficient. It is cultivated to a considerable extent, and most successfully on the summer fallow. The number of entries of this crop was 22.

The number of entries of oats was 26. This crop is depreciating in importance, in the opinion of many farmers, and is by most of them considered to be an exhausting crop, although this opinion is not supported by the result of chemical analysis. It is, however, universally admitted to be an unfavorable crop to stock with clover or timothy, which fact has induced many farmers to relinquish the cultivation of them, with the exception of what they need for their own consumption. They are, however, sown with a good degree of success on turfs turned over either in the fall or spring; and it is a process, in the view of some, by which the land is admirably fitted for a crop of corn the following season.

There were 30 pieces of corn entered for premium, all of which were good; and we are of the opinion that, if the time ever was when the cornfields were burdened with their own productions, we found them so the present season. Great improvement has been made within a few years past in the cultivation of this important crop. The farmers of Berkshire have seen the folly of attempting to cultivate more corn than they can manure suitably, and plant and hoe in proper season. We are fully prepared to accord with the views expressed by former committees, viz., that the crop of corn, if judiciously cultivated, is among the most profitable raised in this country. We have been called to view some pieces, which, in our opinion, were planted quite too thick. The pieces viewed by us varied from 27 to more than 50 hills to the square rod. The most suitable number, in the opinion of your Committee, is from 30 to 35, with 4 to 5 plants in a hill. If planted thicker than this, the ears are much diminished in length and in number. The proper medium should be sought, and this can only be found by experiment.

The entries of meslins were less numerous than those of most other crops, being only six. They, however, were mostly good; but so great was the variety of the mixture, that we were much perplexed in coming to a decision upon their merits. We found presented to us for examination, under the name of meslins, oats and peas, oats and rye, oats and barley, rye and wheat, and wheat and barley; but which of the mixtures are most entitled to preference, it is extremely difficult to decide.

The agriculturists, in the north part of the county especially, are justly feeling a deeper interest in the cultivation of barley than has heretofore existed. It is not only found to be bountiful in its production, but to be one of the best crops with which to seed for pasture or mowing. It is also universally approved of for fattening swine, and it may be safely recommended for all other animals where it is the object to promote the growth or to increase the fat. But a few years since, the competitors for the premiums on this crop numbered but two or three, but the number has gradually increased from year to year, so that this year we are enabled to number ten.

The potato crop has again been visited by blight, and, on some farms, it has suffered to considerable extent by the rot. Both of these maladies have had the effect to materially shorten the crop, although we think it has suffered more by the former than the latter. Eleven crops of potatoes were offered for premium.

There were only three entries of dairies, all of which were meritorious; and the only difficulty we met with, in this department of our labor, was, to decide how the three premiums offered by the Society should be distributed among the competitors.

There were eight crops of carrots entered, most of which appeared well and indicated a faithful as well as skilful cultivation.

The increasing interest manifested by the people of this county in planting and rearing fruit trees, we hail as ominous of great results to those who are thus engaged. The manifestation of interest is not found alone in the farmer; nay, many of this class are found far behind in the race; but those who have a possession of only an acre, or only a fraction of that amount, are successfully cultivating not only the common but the choicest varieties of fruit to be found in our northern clime. We feel bound to notice particularly the laudable efforts making by Asahel Foote, of Williamstown, in this noble enterprise. He is devoting the most of his time to the cultivation of a nursery which contains one hundred and twenty varieties of the apple, twenty-five of the pear, forty of the plum, and twenty of the cherry. We trust that he will receive, at least, a fair compensation for his time and money thus expended; but we believe that the greatest profit, in the aggregate, will result to those who purchase, and carefully plant and cultivate, the trees he is so successfully raising. We have no doubt that the inducement offered by this Society for planting apple orchards, since the fall of 1841, has had its desired effect. We should hope, however, that more were induced to plant than appeared as competitors for the prize, as only seven orchards were offered for premium. The most of these were praiseworthy, and the apparent efforts of the owners to keep them clear of insects, and give proper shape and direction to the tops of the trees, are worthy of the imitation of all.

MORGAN LEWIS, *Chairman.*

SHEEP.

The Committee, Charles K. Lamphier, Chairman, say—

That the number of entries of sheep for premium was twenty-five, having evinced to the Committee that they were selected from good flocks with correct judgment, and we have no hesitation in saying, that there never was a finer exhibition of those animals. Though the wool-growing business affords but small profits, yet we would say to the wool-growers of Berkshire, Continue to improve your flocks by judicious management, and we trust the day is not far distant when your labor will be better rewarded.

HORSES.

A larger number of horses was entered for premium the present year than usual, and the exhibition, especially of breeding mares and colts, and farm horses, was very creditable to the county, and spoke well for the good taste and care of our farmers in this important and interesting department of their stock.

There were thirteen breeding mares, with their colts, offered to the inspection of the Committee; and although the number was so large, yet there were few, if any, among them which do not deserve a favorable notice. The Committee award the premiums,—

For the best breeding mare and colt, to Asa Cone, of Richmond,	$6
" 2d best do. to Amasa Rice, of Pittsfield,	5
" 3d best do. to David Smith, of Dalton,	4

There were seven pairs of farm horses exhibited, from which your Committee deemed it their duty to select the two which, on the whole, would be most serviceable and effective in performing all the various business of the farm. They award the premium,—

For the best pair of farm horses, to Leland J. Burlingham, of Pittsfield,	$6
" 2d best do. to John G. Tuttle, of Great Barrington,	5

The part of their duty least gratifying to the Committee was the examination of stud horses. There were but two or three two years old colts upon the ground, and only one of them was entered for a premium; and although that one bids fair to make a respectable horse, yet his age, and general character, were not such as to entitle him, in the opinion of your Committee, to the premium offered.

But, though the exhibition of horses of this kind, from our own county, was so meagre, the Committee observed with pleasure a horse from a neighboring State, which, if he is a fair representative of his class in that State, speaks well for the beauty and excellence of the horses there. And we cannot but hope, that the sight of such a horse from abroad will provoke an emulation on the part of our horsemen to exhibit, at some future show, an *equal* at least, if not a superior, specimen from among ourselves.

LEVI SMEDLEY, Jr. *Chairman.*

Ploughing Match.

A perfect plough we never expected to see, but perfect work of the most perfect ploughs extant, we think we have seen today. That the plough is yet to be improved, who can doubt that has observed the progress of improvement in this implement for the last twenty-eight years, the period through which these exhibitions have been held by this Society? Reverting to the rude and clumsy wooden ploughs of thirty years ago, and contrasting with them the polished and life-like models of the present day, we think, for the moment, that we have attained to perfection. But just so, doubtless, did our fathers congratulate themselves on the advances they had made upon the ruder implement of a previous generation; and just so may the coming generation boast of its superiority to the present, in the same respect. Every age has doubtless felt a self-complacency, in the imaginary perfection of its own implements of husbandry, and of its own mode of using those implements: and that in periods when the plough was scarcely more than a gigantic wooden pick-axe, fastened by the handle, with twisted willows, to the horns of the cattle, or to the tails of the horses, and held by the ploughman, when held it could be, by one of its points, while the surface of the ground was only tormented by the lacerations of the other. That this is no misrepresentation of the earliest forms of the plough, may be shown by existing figures of that implement on ancient coins; and that we have committed no slander on the ancient modes of attaching the plough to the team, we will prove by a penal act of the Irish parliament, passed as late as the year 1634, and entitled "an act against ploughing by the tayle," in which it is set forth that "in many places in this kingdom, there hath been a long time used a barbarous custom of ploughing, harrowing, drawing and working horses, mares and colts, by the tayle; (besides the cruelty used to the beasts,) the breed of horses is much impaired in this kingdom." So imperfect was the implement employed for breaking up the soil among the ancient Romans, that it was customary to plough the ground from three to nine times over, to prepare it for a crop; and it was doubtless owing to the same cause, that, during the same period, the Roman farm was limited to two acres, the entire surface of which, as we have seen to-day, a Berkshire ploughman could invert, in the most perfect manner, in less than eight hours!

The ancient Norman carried with him a hatchet, to assist the working of his plough, by cutting asunder the more obstinate turfs ; and our British ancestors, according to the old agricultural poet Tussen, provided themselves with

> " A plough maul and plough staff to further the plough,
> Great clods to asunder that breaketh so rough."

The earliest hint, which gave birth to the primeval idea of constructing such an implement as the plough, was perhaps suggested by the well-known form and favorite employment of the proboscis of the swine ; for the celebrated Jethro Tull, who took much pains to investigate the early history of this implement, observes, that it was probably found out by accident, and that the first ploughers of the ground were hogs. Certainly one would be disposed to think that a regard to economy would have led the ancients to employ this animal, not only instead of their hoggish plough, but also of their team, and its driver to boot.

From about the beginning of the 16th century, the plough began to undergo progressive, but gradual modifications. But it was reserved for the present age of science to give to this, as well as to almost every other form of labor-saving machinery, that degree of perfection which seems to render hopeless any further attempt at improvement. And it is a fact in the annals of agriculture in which the American ploughboy may well indulge an honest pride, that the first declaration of those correct, scientific principles which ought to govern the construction of the plough, was made by an American President, the never to be forgotten author of the Declaration of American Independence.

May American independence never cease, not only to bless, but to characterize the American farmer ; and, though fluctuating prices may sometimes compel him to exclaim with honest old Tussen,

> " What charge and pain,
> To little gain,
> Doth follow toiling plough ! "

may he ever be able, in view of the many peculiar advantages of agricultural life, to adopt the conclusion also of the same quaint author—

"Yet farmer may
Thank God and say,
For yearly such good hap;
'Well fare the plough,
That sends enow,
To stop so many a gap."'

The number of teams entered for the Society's premiums was twenty-four—ox teams, thirteen, horse teams, eleven. The quantity of land assigned to each team was one fourth of an acre—the time allowed for ploughing 60 minutes, including a respite of 10 minutes. Your committee have awarded the premiums as follows:—

Ox teams,	1st	premium	to George S. Willis, of Pittsfield,	$7
"	2d	"	" Sam'l. Lewis, of Great Barrington,	6
"	3d	"	" Joseph Howland, of Pittsfield,	5
"	4th	"	" Freeman Bates, of " .	4
"	5th	"	" William P. Walker, of Lenox,	3
"	6th	"	" Asaph D. Foot, of Pittsfield, .	2
Horse teams,	1st	premium	to John Sears, of Lenox, . .	7
"	2d	"	" Loomis Millard, of Egremont, .	6
"	3d	"	" Nelson Tracy, of Pittsfield, . .	5
"	4th	"	" Daniel Sprague, of " . .	4
"	5th	"	" Jos. K. Hewens, of W. Stockbridge,	3
"	6th	"	" William Bradley, of Lanesborough,	2

ASAHEL FOOTE, *Chairman.*

Domestic Manufactures.

Amidst all the changes and improvements in manufacturing labor which the last third of a century has witnessed in this country, this Society has always kept its eye steadily fixed upon household industry. The industry of home, the employments of the fireside, have received our unwavering encouragement. Whatever improvements may be made in labor-saving machinery, or however cheaply a great variety of fabrics may be produced thereby, there will still be objects of domestic industry that cannot be superseded.

Most fit and proper is it, that household industry should be encouraged by full opportunity for the exhibition of its products, and by liberal premiums. It is the industry of our beloved wives, and mothers, and sisters, and daughters. They, whose virtues have secured our highest respect and our best affections, come up with us to our annual Fairs, to bear witness with us to the usefulness, the honor, the dignity of labor. The women of Berkshire have not only given to all our annual exhibitions the charm of their presence, but have brought with them the evidences of their useful and elegant employments.

Most fit and pleasant it is that an association which seeks to promote the common interest and happiness should encourage the industry of home. Blessed is that influence which increases, in any degree, the comfort and contentment of the homes of New England, which adds to their restraining power to induce our people to live by, and die by, the altars of their childhood. Broader lands, richer harvests, more abundant leisure, may attend the enterprise of the emigrant, and probably will; but probably, also, disease will be more familiar with his family circle, death will knock sooner at his door, and the opportunity of giving a New England education to his children, "fast by the oracles of God," will be lost. Honor and blessing to every influence which binds the sons and daughters of Berkshire to the homes of their youth!

In perfect sincerity, the Committee can express great gratification at the exhibitions of household manufactures the present year. The number of articles was unusually large. This has increased the difficulty of discriminating correctly in awarding the premiums. The number of objects is too great, and the time is too limited, for any Committee to do entire justice in their decisions. They must act hastily and promptly, and with as much correctness as they can. For such an exhibition as we have had this year, the amount and number of premiums offered are too small. We are well aware that this results from the limited funds of the Society. But these funds may, and must, be increased. Any member of this Society, who has looked at the household manufactures the present year, and at the inadequate premiums given to them, will be fully convinced upon this point. We hope every member of this Society, who has not done it, will unite in a plan now matured, which, without increasing the annual tax upon himself, will essentially increase the aggregate annual fund.

JULIUS ROCKWELL, *Chairman.*

BUTTER, CHEESE, &c.

There were thirteen entries for premiums on cheese, and ten on butter. The cheese offered was of a superior quality, and it required great care and attention, as well as taste, to determine which was best; it was generally good, and, with the exception of one or two parcels, was well manufactured, and of a rich quality. The parcels of butter were exceedingly good, and well manufactured. Of all the products of the farm, there is none more extensively used than butter. In its manufacture, no new method is recommended. The process is as old as the hills, and one which every good housewife well understands. It requires no costly or complicated machinery, but simply clean hands, good order, and great neatness. With these ingredients, there never can be a failure in the making of good butter.

The Committee have awarded the following premiums,—

For the best 100 lbs. of cheese, to Mrs. N. Cook, of Richmond,	$5
" the 2d best, to F. & C. Ford, of Windsor, - -	4
" the 3d best, to Mrs. Alvira Bradford, of Lanesboro',	3
For the best 50 lbs. of butter, to Mrs. Hosea Merrill, Jr., of Pittsfield, - - - - - - - -	5
" the 2d best, to Mrs. Jerome Hurlbert, of Pittsfield,	4
" the 3d best, to Mrs. Levi Childs, of Pittsfield, -	3
For the best 100 lbs. of maple sugar, to Asahel Sherman, of Lanesboro', - - - - - - - -	3
" the 2d best, to Henry Robbins, of Pittsfield, - -	2
For the best two bushels of timothy seed, to Samuel Goodrich, of Stockbridge, - - - - -	3
" the 2d best, to Asahel Sherman, of Lanesboro', -	2
" the 3d best, to Edward Sexton, of Stockbridge, -	1

LESTER FILLEY, *Chairman.*

PLYMOUTH COUNTY AGRICULTURAL SOCIETY.

From the Reports of the Committees of this Society, and the Statements accompanying the same, the following selections are made.

On Improvements.

It is not to be expected of an association, more than of an individual, that every project formed will be carried to a full and successful issue. We have failed of accomplishing numerous important objects, to which we have invited the attention of farmers, and encouraged their cöoperation in offers of liberal premiums. We early urged them, in the absence of stones, to plant hedges for the future protection of their fields; we also offered liberal encouragements to the planting of forest trees suitable for ship timber. These projects have hitherto been attended with no visible success. Nor have the inducements held out to border the highways with fruit, and shade-trees, called out all the exertion that was desired, but in several towns in the county, it is perceived, with pleasure, that something of this useful and ornamental work is every year in progress.

The efforts of the Society to produce an improved culture of the annual plants, have been followed with very satisfactory results, have been even more successful than the most ardent members dared expect. Some of our grain and root crops are now nearly double what they were before the existence of the society, not exclusively with competitors for premiums, but generally through the county. Few of our farmers now are chargeable with the fault, which was common thirty years ago, of planting and tilling fields not prepared to produce crops equal in value to the labor bestowed. We have witnessed some instances of remarkable success in the culture of particular crops,—

success that might advantageously compare with the products of the richer soils in other counties. New motives have every year been presented to perseverance in our associated labors. And, it seems the just influence has been produced; for, rarely have we seen an associated body, engaged in any cause, moving such a number of years with so much regularity, and so steadfastly devoted to the object of pursuit. We have very properly kept this great interest of human life distinct from interests and views which it is difficult to advocate without the engagement of strong passions in the cause. Here, different religionists and politicians have cordially met, as dependent children on mother earth, and mutually obliged to inquire what is demanded of us, that we may fully realize proffered blessings. It is a subject of gratulation that no violent or evil spirit has ever entered our meetings to interrupt harmony or obstruct the usefulness of labors. We may properly felicitate ourselves, both in review of the past and in prospect of the future. The growing interest in our exhibitions, the multitudes who attend them and retire praising the good work that is proceeding, give us a pledge that the young members of the society will discover the importance of perseverance in good exertions, and never suffer this institution to languish till a more perfect general cultivation shall supersede the utility of it.

Our work in the cause of an improved cultivation should not be restricted to the interest, convenience, or supply of a single generation, but be governed under the impression that men, no less than crops, exist in succession, and that every man, in passing, ought to employ the powers given him in preparing the way for the comfort and prosperity of successors. This subject, we suppose, does not employ as much thought and attention as its importance demands. Hence the difficulty in persuading men to propagate forest trees of slow growth, though such trees will manifestly be necessary to enable posterity to continue arts not only already begun, but even now deemed necessary to comfortable living. We hope good sense and patriotic desires to meet the wants of coming generations will ultimately effect, in our country, what is enforced by law in some parts of Europe,—the preservation and extension of timber trees.

With regard to the forest trees of quick growth, and which will flourish in a comparatively barren soil, it is no longer thought, as was formerly the case, a monomaniacal business to sow and protect them. There seems, at present, a good measure of zeal on this subject. Four claims have been entered to the premiums proposed to be paid in 1852, for forest trees more than five years old. The land selected by the applicants generally is such as yields no profit at present; grain has been sown on it till it refuses to grow; the several lots are in good condition to seed with pine and birch. If the applicants do their work faithfully, it is presumed they will succeed in obtaining premiums, and, what is far better, will permanently enhance the value of their farms. The sowing of forest trees should not be confined to competitors for premiums; it should form a part of the autumnal business of all farmers who possess fields that have been exhausted with grain crops, and the number of these farmers in this county is great. We earnestly invite them to abandon endeavors to raise grain and grass where little or nothing more than the value of the seed applied can be obtained. Convert the fields into forests; beautiful ones can be formed within fifteen years. The time has passed for any just dread of too extensive a wilderness here. Our shops of arts, our domestic fires and numerous steam-engines will require sufficient annual openings to prevent the generation of miasmata, or the formation of secure coverts for dangerous reptiles and beasts of prey. The aspects in the county will not only be improved, but greatly beautified, when our plains shall be covered with wood and timber, and our valleys loaded with grass and grain.

We think there must be something like a philosophical system of interspersing woods and cultivated fields, or the variableness of this climate will often disappoint the hopes of the husbandman. It is highly proper that this work should commence, and have rapid progress, in this early settled county, where so much of the territory has been laid bare of forest, and, from proximity to the sea, it is exposed to the full influence of every change in wind and weather. We are confident that a judicious bordering of our cultivated fields generally with trees, would render the changes from winter to spring, and spring to summer, more perceptible, and the foundation of more certain calculations.

A new object of culture has been presented by the Trustees the present year, and encouraged in the offer of premiums. Cranberries have hitherto been spontaneous productions, but an increasing demand for the article seems to justify attempts to improve and multiply the fruit by art. We encourage, in this case, the practice of an art concerning which we possess very little knowledge. Applicants must make trials, and gain knowledge on the subject from their experience. This, they seem fully prepared to do. Five claims have been entered to the premiums offered for cranberries in 1849, and no two of the competitors are proceeding exactly alike. When the several experiments shall be completed, the public will have the results of different trials, and, we hope, some evidence of what is the best method of culture.

Claims requiring decisions of the committee on improvements, this year, are not very numerous. In the renovation of swamps there have been no very extensive operations the last two years. The applicants for premiums have travelled over very little surface, but have wonderfully smoothed the rough places as far as they have proceeded. Bela Mitchell, of Bridgewater, is the only claimant who has given a statement of his operations. He has subdued, since 1844, one acre and twenty-three rods of swamp, which was in a very rough state, and on which great labor has been performed. It is now a beautiful plat of English meadow. The work has been done at an expense of about eighty-five dollars; but, from present appearances, there can be no reasonable doubt of its proving a profitable investment. The award of the first premium, $15, is recommended.

Nathan Chandler, of Duxbury, entered a claim for subduing bushes in pasture land. He has subdued the bushes on about six acres. Before his operations commenced, there was little to be seen on the land excepting bushes and rocks. It is now cleared of bushes, and, to great extent, of rocks, and sowed down with rye and grass seed. The work has been done at an expense of about $120. Mr. C. is a young man, hires all his team work, and possibly he will presently discover that there is a limit beyond which even the most praiseworthy improvements cannot be profitably carried in the outset of life. Should the next season prove unfavorable for the rye crop, as not unfrequently happens, it will require a great many seasons for grass enough to grow on this land to pay for the clearing. Whether or not Mr. C. has been advancing personal interest, he has performed a useful work in the community, and is entitled to the first premium, $10.

Henry Alden, of East Bridgewater, has performed an experiment with lime, in accordance with the directions given, and is entitled to the premium, $25. The lime in Mr. A's experiment manifestly had some influence on every crop, yet not enough to make its application much of an object.

Paul Hathaway, of Middleborough, claims the premium offered for the most careful and satisfactory experiment in the use of plaster on one acre of land. No directions accompanied this offer. Applicants were left to the exercise of their own judgment. The Trustees, however, did not intend to give a premium for any experiment not conducted with sufficient accuracy to enable farmers to determine whether it be advisable to use plaster at all, and, if it be used, on what crops it will prove most efficacious, and at what time, and in what quantity, it should be applied. The experiment of Mr. H. imparts very little information on these points. He states that the application of plaster increased the quantity of grass, but omits telling us how long the land had been in grass, what kind it produced, or when the plaster was sowed. In one instance, he sowed three bushels on an acre, in another only two, and his statements seem to prove that there was the greatest influence from the least quantity; yet Mr. H. says nothing about the quantity he should think it best to apply. He remarks, that plaster is particularly effective on clover and potatoes. This is the opinion of many farmers; but we want some exact experiments that will show us whether the efficacy is sufficient to justify the expense of the application, and in what quantity it produces the greatest effect. In these views, the Committee cannot think Mr. H. entitled to a premium, but hope the Trustees will reward his zeal in a gratuity of $5.

MORRILL ALLEN.

Bela Mitchell's Statement.

The land which I entered for premium was in 1844, about three quarters of it, covered over with bushes and small maples: the other with brakes and flat grass. About 40 rods, where the grass was, I turned the sod over with the hoe, the remainder I dug up with the hoe and carted off. I then levelled off the top, and spread at the rate of 80 loads of loam to the acre; then sowed herd's-grass seed, after which 8 loads of compost manure per acre was spread. In March, sowed clover. I dug three drains, one on each side and one in the middle; the most of the seed was sown from the first to the thirteenth of September; about 40 rods was dug over the last of Sept. 1844, and laid until Aug. 1845; I then carted the turf off, and covered with loam as before, and sowed it. The labor, at $1 per day for man and cattle, done on the one acre and 23 rods, $97 75. I took from the lot one and a half cords of wood, which was worth $6 00, two cords of roots and stumps, $4 00.

Bridgewater, September 12, 1846.

Henry Alden's Statement.

The following is a statement of the process and result of an experiment in the use of lime as a manure. April, 1843, made a compost heap as follows: 11 loads of peat, 5 do. barn manure, and 5 casks of lime, well mixed. Made another heap at the same time, same quantity of peat and barn manure, without lime. May 15th, ploughed an acre of greensward, spread three quarters of the limed manure on one half acre of the above ground, and three quarters of the other heap on the other half acre. Harrowed and cultivated it. Furrowed both ways, 3 feet 4 inches each way. 17th, planted it with corn, 4 kernels in a hill, except 2 rows all around the piece, and 34 hills under two apple trees, which was planted to potatoes. The above ground was hoed three times from June 5th to July 8th. In September, the stalks were cut. October 7th, the corn was harvested, 34 hills deducted from the limed part to equalize the 34 hills of potatoes under the trees on the other part.

Amount of corn on the whole piece, 41 bushels 64 lbs.; on the limed part, 21 bush. 55 lbs.; on the other part, 20 bush. 9 lbs.

Amount of potatoes on the whole piece, 35 bushels; on the limed part, 18 bushels 24 lbs.; on the other part, 16 bushels 36 lbs.

1844, prepared the ground and sowed it to rye and grass.

Whole amount of rye, 7 bush. 12 qts. On the limed part, 4 bush. 4 qts.; on the other part, 3 bush. 8 qts. The straw not weighed, but estimated at a quarter more on the limed part than on the other.

1845, July 4, mowed the grass and made it. Whole amount by weight was 869 lbs. On the limed part, 528 lbs.; on the other part, 341 lbs.

1846, July 6, mowed the grass and made it. On the limed part, 792 lbs.; on the other, 636 lbs. Whole amount on both pieces, 1428 lbs.

East Bridgewater, *Sept.* 16, 1846.

Paul Hathaway's Statement.

The experiment I have made is as follows:—One acre of land, I sowed three bushels of plaster, leaving one strip through the piece. In 1845, at mowing time, it was thought one fourth more. In 1846, the same quantity was sown of plaster, and fourteen rods plastered weighed 236 lbs., fourteen rods not plastered weighed 163 lbs., making 650 lbs in favor of the plaster. This piece is a gravelly loam.

One other piece, three quarters of an acre, was sown in 1845, at the rate of two bushels of plaster to the acre—land, sandy loam in a good condition. 1846, was dressed with two bushels as last year, and weighed: Ten rods plastered, 263 lbs., ten rods not plastered, 205 lbs., making 960 lbs. in favor of the plaster. I have made use of plaster upon two other pieces of mowing with equal success.

I have plastered all my potatoes; my hands have been digging to-day; found 5 or 6 diseased. I would here remark, that I esteem plaster upon my farm for clover and potatoes; for other crops, I have not had sufficient experience.

Middleborough, Sept. 15, 1846.

Fruits and Vegetables.

The quantity and variety are not so great this year as heretofore; but the quality was never superior. We are happy to perceive that attention to fruit-raising is gaining ground in the county, and that various towns have more or less exhibitions of their own, at home, every year. This is as it should be; but we hope they will not fail to encourage our annual jubilee by contributing a portion of their good fruits.

Eleazer Carver, of Bridgewater, presented a specimen of very large and very palatable peaches, declining any premium therefor; and, although the market and the country are now full of this kind of fruit, and it is said to be very easily raised, still we think merit is due to Mr. Carver, and we present him a premium thanks, at least, for his fair specimen.

Ansel Perkins's (of North Bridgewater,) potatoes are of a red cast, and obtained by himself, as he informs us, from the balls, about eleven years ago. "The quality," he says, "for the table, is decidedly superior to that of any other kind. They ripen earlier than the *long reds*, and retain all their good qualities till the summer after their growth. The potato disease they have, as yet, entirely escaped."

Abiezer Alger, of West Bridgewater, gathered, as appears by a certificate of a disinterested person, two hundred and ninety-six bushels and seventeen quarts of cranberries, from two acres of ground. This may be thought not a great crop; but, when we take into consideration the superior quality of Mr. Alger's fruit, we must believe it to be a very fair exhibition. The farmer who owns a cranberry meadow may consider himself very fortunate, as little or no labor is required in their cultivation, and there is no want of a ready market.

B. BROWN, *Chairman.*

SUPERVISOR'S REPORT.

Dr. Anthony Collamore, of Pembroke, and George W. Wood, of Middleborough, entered claims to the premiums offered for experiments in the application of manure to mowing grounds. There was not sufficient time allotted, for these experiments, to make them as satisfactory as might be desired. This was apprehended at the time the offers were made; but farmers are so averse to seeking any distant premiums, that we are often induced to name less time for the performance of an experiment than our judgment, under other circumstances, would dictate. The first months in the last two seasons were unusually dry. This circumstance may have given the applicants too unfavorable views of the general influences of spring dressings. The results of both experiments indicate that manure is more efficacious, applied in the fall than in the spring. It will so appear as often as the first of a season proves dry. But, in our experience, manure applied in the month of May produces more effect, if a sufficiency of rain follow, than in any other month. It is a general rule given by agricultural writers, to manure as near the time of growth in the plants as possible. This rule would lead us to apply fall dressings early as practicable. And, we suppose, it is generally best to do so. But, if a dry autumn ensue, we shall perceive very little influence, from the manure spread in September, on the latter growth of the grass. One of the experimenters obtained the greatest crop where the application was made in September, and the other where it was made in November. The applicants are situated fifteen miles apart, and it is very supposable that more showers might fall in Middleborough, in the month of September, than in Pembroke. Difference in the operations probably had much influence in the case. Mr. Wood's manure was reduced to a finer state of pulverization before applied, therefore it would take more immediate effect. We believe the applicants have conducted the experiments with sufficient care to have produced more satisfactory results, had not the seasons been so singularly unfavorable for top-dressings. It is judged expedient to give equal reward, and recommended that $10 be paid to each of them.

Six entries were made for compost manure. The claimants have not generally been as particular as they should have been in the description of materials used in composting, and, with a single exception, all have omitted any description of the soil on which it was applied. These omissions are very blameworthy. The labor of composting may be almost entirely lost in the use of materials not adapted to the soil where it is applied. If a clayey soil is to be dressed, and we make the compost heaps chiefly with clay, all we can possibly gain by the labor will be the absorption of some of the gases contained in the animal manure of the heap. But, if compost for a clayey soil is made chiefly of light loam and sand, then we may anticipate much benefit from the principal ingredient, in ameliorating the character of the soil, and reducing it, as often as ploughed, to a more permeable state. When a light soil is dressed, the principal ingredients in the compost should be of a rigid character, that the soil may be gradually reduced to a state of greater tenacity. The success of farmers, situated at a distance from cities, will always depend very much on a judicious mixture of soils. This, at a first view, seems a very herculean labor, and some theorists use the language of discouragement, on the supposition that the expense will always exceed the benefits. Where a great deal is attempted in a given time, no doubt this would prove true. If we should undertake, in a single year, to remove all the sand in Plymouth county on to the clay flats in Norfolk, or the clay found here on to the sands in Barnstable, it would prove a very expensive and unprofitable enterprise, equal to the project of irrigating a whole country from the rivers by steam power. Numerous important objects can be accomplished in gradual advances, which never could be reached in the execution of magnificent schemes. One great battle would probably have decided the Revolutionary War in favor of Great Britain: by cautious movements, and careful improvement of minor advantages, the final decision, to our great joy, was widely different. The farmer, who would ruin himself in a project of reducing all his soils to the state desired in a given time, may do something of the work every year, not only without loss, but with something of profit. If all our farmers, in the composition and application of manure, would observe the simple rule of dressing fields with materials that form a contrast to the natural soil, in half a century the whole face of our country, without carting one county into another, would be changed, from roughness and sterile appearance, to verdure and beauty.

William H. Adams, of Bridgewater, appears to have been the most methodical and correct of the competitors, both in composting and in the application of his manure, and he is considered entitled to the first premium, $10.

To Orsamus Litteljohn, of Middleborough, who exhibits a praiseworthy example of ingenuity, industry, and economy, in this and other branches of husbandry, is awarded the third premium, Colman's Report, or $5, at his option.

To the Committee on Produce, a claim was presented for the best crop of spring wheat, by Benjamin Hobart. Mr. H. makes various experiments, and seems sanguine in the belief that he shall ultimately prove, to the conviction of our farmers, that wheat can be profitably raised in the county of Plymouth. He has certainly had more than ordinary success with the crop, yet, like other zealous experimenters, he makes some mistakes. According to his statement, it appears he was conscious of error this year, in the use of so large a quantity of seed; we think he also erred, in the application of manure to the land near the time of sowing. For the small grains, the ground should always be carefully prepared to produce as regular a growth as possible; fresh manure causes so vigorous a growth, at a certain period in the season, as to endanger the grain in several ways. Mr. H. did not obtain the required quantity, and is not entitled to the premium. It is recommended that a gratuity of eight dollars be given him.

Five claims were presented for the best crop of Indian corn. The season, with the exception of some annoyance by worms, was unusually favorable for this crop, and more bushels to the acre are reported this year than has been usual. The greatest number is 107 55-75 bushels, and the smallest, 85 65-75.

The first premium, $8, is awarded to Daniel Alden, and the second, $6, to Paul Hathaway, both of Middleborough. These gentlemen cultivated their corn chiefly with horses, and did it at small expense. The fields presented a level surface, and were remarkably clear of weeds. In the field of Mr. H., it appeared that worms had not operated much, if at all; it was so even a growth, it seemed difficult to select a square rod, in any part of it, which would not be nearly a fair average of the whole field.

To Messrs. Nathan Whitman, Josiah Whitman and Orsamus Litteljohn, the Committee award, to each, one vol. Massachusetts Ploughman, and one vol. Boston Cultivator.

On one experiment only in sub-soil ploughing, claim has been entered by Dr. Anthony Collamore, of Pembroke. It was conducted, in every respect, conformably to the requisitions, and the result shows greater influence of sub-soil ploughing than has before been reported. The difference in the two rods selected was so great, the doctor seemed inclined to charge the supervisor with some mistake in measurement; but he endeavors to keep his mind so intent on that business as to avoid mistakes. The whole crop would probably have been weighed by the owner, had not the field been so broken by the ravages of worms as to make it impossible in that way to attain any more correct views of the influence of sub-soil ploughing. We have now had three experiments, and the result, in every instance, has showed a salutary effect of sub-soil ploughing beyond the expense of the operation. This fact is more interesting to the public, than the precise amount of influence, which it may be very difficult to ascertain with minute accuracy.

There is one point in the doctor's statement to which we wish to direct some special attention. He considers it wrong to mutilate the corn plant by taking off the top stalks, and gives one reason for the omission, which, though it seems philosophical, has not, to our knowledge, been often urged in the case. He supposes the quality of the corn is impaired in topping the stalks. We had proved in several experiments that the crop would be diminished, but had not insisted that what might be obtained would be less perfect. This idea, advanced by one of the profession who have extensive knowledge concerning what kills and what heals, we hope will command just attention. The premium of $10 is awarded to Dr. Collamore.

The premium of $8 for the best crop of oats is awarded to Leonard Hill, of East Bridgewater, who raised sixty-three bushels and three pecks on one acre and five rods. Mr. Hill is also entitled to $8, for the best crop of potatoes. He raised 351 24-56 bushels on an acre.

To George Drew, the premium of $6, for the best crop of white beans. He raised seventeen bushels and seven quarts on eighty-two rods of land.

For the Committee on Improvements and Produce.

MORRILL ALLEN.

Anthony Collamore's Statement.

The land selected for the experiment, in the application of compost manure to mowing fields, was a sandy loam, seeded down to grass, I believe, in 1840. It was measured from the middle of a field, and divided into five pieces two rods wide and ten rods long, so that the lots should be as near of similar soil and condition as possible. A heap of compost consisting of mud from the clearing of ditches, in low grounds, and manure from my neat stock as dropped in my barn cellar, in the proportion of one load of the latter, and two of the former, was formed in the spring of 1845, as required by the regulations of the Trustees. This was hoed over and intimately mixed before spreading.

A similar heap was formed in the spring of 1846, of the same materials and proportions, excepting that about six bushels of unleached ashes were mixed in when the heap was hoed over. It was required, in the month of April or May, to spread five loads of it, even as possible, on one eighth of an acre; in July or August, five loads more on an adjoining eighth of an acre; and five loads on each remaining lot, in the next three months. The Supervisor required that the hay on the lot on which the manure was spread in May, 1845, and on one of the other lots, should be weighed in 1845; in the next year, the whole of the produce to be weighed. The compost spread in May each year was spread as evenly as possible, and raked in, that it might not obstruct or press down the growing grass. The several times of manuring, mowing, and the produce, may perhaps be best exhibited, as follows:

Lot No. 1.—Manured May 20, 1845; mowed July 16, 1845; weighed 218 lbs.; manured May 11, 1846; mowed July 9, 1846; weighed 298 lbs.

Lot No. 2.—Mowed July 16, 1845; manured Aug. 2, 1845; mowed July 9, 1846; weighed 296 lbs.; manured Aug. 10, 1846.

Lot No. 3.—Mowed July 16, 1845; manured September 11, 1845; mowed July 9, 1846: weighed 299 lbs.; manured September 10, 1846.

Lot No. 4.—[This lot supposed an average lot.]—Mowed July 16, 1845; weighed 185 lbs.; manured October 9, 1845; mowed July 9, 1846; weighed 340 lbs.; manured Oct. 8, 1846.

Lot No. 5.—Manured November 13, 1845; mowed July 9, 1846; weighed 361 lbs.; manured November 2, 1846.

It may here be observed, that the seasons of 1845 and 1846 have been remarkably dry seasons, particularly the last, and therefore unfavorable for top-dressing lands in the early part of the fall; besides, if the competitors had been required to continue another year, and weigh and note each lot separately, the experiment must have been more satisfactory. As it is, the effect of manuring the four last lots appears very little, in consequence of the dryness of the season. The next winter and spring rains must now wash the manure in, and the weight of the produce of the next year test the most favorable time for its application.

At this stage of the experiment, a few inferences may be made.

The application of manure in May does not seem materially to increase the growth of the grass, lot No. 1 producing only 33 lbs. more, in 1845, than the supposed average lot (No. 4,) and, with the additional manuring in 1846, producing less than three of the lots with only one dressing, and only two lbs. more than No. 2.

Very little difference appearing between No. 2, (296 lbs.) and No. 3, (299 lbs.) The most benefit appears to be derived from manuring on Nos. 4 and 5, when the application was made in

October and November—No. 4 increasing 155 lbs. and No. 5 176 lbs., while No. 3 increased only 114 lbs., and No. 2, 111 lbs., which seems to favor the theory of those who suppose that the late application of manure is useful, by affording a protection to the roots of grass through the winter. But perhaps inferences should be drawn with caution from a single experiment, which, tried under different circumstances, might yield different results. But should time and opportunity be afforded another year, the result of this experiment the third year will be noted and communicated.

Pembroke, November 10, 1846.

George W. Wood's Statement.

The manure I used, to ascertain the best time to spread compost manure, was made as follows:—in the month of April, 1845, I made a pile of twenty-five loads, by mixing one third green manure from the barn, one third muck, one third soil and scrapings around the barn, &c. About the 20th of May, I spread five loads on one eighth of an acre; in August, five loads on an adjoining one eighth of an acre; in September five loads; in October five loads; in November five loads more, each on one eighth of an acre, and all adjoining each other. The soil was a clayey loam, very near alike.

I stocked the land down with oats and grass seed in April, 1842. The 16th July, 1845, I weighed the hay on the one eighth spread to manure in May; it weighed one hundred and seventy-six and one quarter lbs. Weighed, the same day, the hay on the one eighth of an acre adjoining, no manure, one hundred and seventy-one and one quarter lbs. In April, 1846, I made another compost heap in the same manner and of the same materials as above described, and I have spread the same land about the same time, and in the same manner, as in 1845, up to this time. July 24, weighed and got in the hay on the whole five eighths of an acre; made the hay three days; where the manure was spread in May, two coats of manure, the hay weighed four hundred and forty-one lbs.; spread, in August, four hundred and thirty-eight lbs.—in September, four hundred and ninety-nine and a half lbs. —in October, four hundred and seventy-two and a half lbs.—and in November, two hundred and seventy-six lbs.

The manure was all shoveled over in August, each year, except that spread in May. I spread in May, to try the experiment; most people spread early. I think May is too late to spread before haying. I am satisfied, from my past and present experience, that September, as a general rule, is the best month to spread manure for grass. I think one cause for that spread in November being so much smaller, was owing to the worms eating it more than the rest; or else the manure caused that, spread early, to start more last year. I should think, where there was no manure spread, my crop of hay was one third less than where the manure was spread in November.

Middleborough, October 16, 1846.

William H. Adams's Statement.

In the management of my stable manure, I have thought it best to use that kind of soil with manure that would apply best to my land. Most of my land being low, swamp land, I have taken my soil from high, loamy land, in the proportion of two or three loads of soil to one of manure. Where I have yarded my cows this season, I covered the ground three or four inches deep with soil, using the same kind of soil that I did with my stable manure. I have thrown up my manure almost every day into piles, mixing in soil. This keeps it from drying up, and well pays the expense. The amount of stock on the place has been eight horses, fourteen cows, and twelve hogs. This has not been the number all the time, but I think it will average that. The number of loads carried out since last spring, amounts to three hundred and seventy-three loads and thirty-nine feet.

Bridgewater, Oct. 14*th*, 1846.

Orsamus Litteljohn's Statement.

I had thirty-two loads of compost manure for my orchards. It was floats, dug up round rotten stumps in the woods, and put in heaps the year before. They were carted to the field, and two hogsheads of salt ley added, and shoveled over. This was well rotted, and proves first-rate.

I have used on my reclaimed meadows eighty-eight loads, made of mud three fourths, and one fourth coal-dust, which had seven large ox-wagon loads of hog and horse manure added. It was cut over twice, and found quite warm each time. This manure was bought at two dollars per load, delivered. The other work, drawing mud, &c. was hired by the day, which prevents any estimation of the cost, but a strict account was kept on book. It cost a fraction over twenty-two cents per load. It was spread between August 6th and 12th, and I have this day, Sept. 17th, cut a good swarth where it was used.

I made other compost heaps in the field with my green barn dung, that was mixed with refuse corn butts and urine, which was used on grass and proves very good. This lot must have cost something less than the above It was more than two thirds soil, yet there was heat enough to rot the whole. My other compost heaps were made up in the barn yard. Every variety of materials that could be collected was used—mud, soil, coal-dust, straw, pine needles, ashes, lime, plaster, salt, soap-suds from the wash-tubs, sink and back-house manures, dung and urine from the stock, carefully saved. These materials were mixed and laid up with a shovel, as light as possible, while they were quite wet, in rows from three and one half to four feet high. These heaps began to ferment in less than three weeks, and, at the end of six weeks, were ready for any soil or crop.

I have had five hundred and three loads of compost made this season ; the loads from twenty-five to thirty cubic feet each. I have kept a book account daily, and I found that good manure has cost me less than one cent the cubic foot.

The labor in collecting material costs about six cents per load, the cutting over about two cents, and carting out, five cents.

Middleborough, *Sept.* 29*th*, 1846.

Benjamin Hobart's Statement.

I ploughed and sub-soiled one acre of land, on the last of April, 1846; ploughed it again on the first of May, and put on twenty-five loads of good compost manure, from the horse stable and barn yard; spread the same, ploughed and harrowed it in, and sowed the wheat on the 6th of May, a little over three bushels to the acre; harrowed and bushed it in, sowed some grass seed before the last bushing over: I did not soak the seed, or put any lime or plaster on the land; there was some lime and plaster put into the compost heap in the barn yard; the land was in corn the year before, and yielded over ninety bushels to the acre. I did all in the most common way, to see if I could not raise wheat with as much certainty and as little trouble as other grain. Reaped the wheat July 28th, and stacked it up in the field, and let it stand three weeks. I then took it into the barn, and had it threshed out with a threshing machine, and the result was, a little over eighteen bushels of good clean wheat, not enough to secure the premium (twenty-two bushels).

The wheat was sowed too thick—it grew so fast, and the straw was so slender, that, when it was lodged, it was so matted together it could not right again; there was nearly two loads of straw on the piece. My object in sowing so thick was to prevent tubers, preferring to have one good stock only from a clevel.

It is quite a question among farmers, how much seed ought to be sown to the acre. I have tried different quantities, and am of the opinion, that a little over two bushels, for summer wheat, is the best quantity. I say a little over, that is, enough to make up for any bad seed, or loss by scattering. The kind of wheat which I sow is that of the golden straw, and is spurred.

South Abington, *Sept.* 28, 1846.

Daniel Alden's Statement.

The land on which I raised the crop of corn entered for premium, is a sandy loam; in 1845, it was grass; in October of that year, it was ploughed; in the spring of 1846, carted on thirty loads of compost manure, and sowed three bushels of salt, cross-ploughed with a light furrow not disturbing the sod, harrowed twice, furrowed three feet and four inches apart both ways; planted the 12th of May, four kernels in a hill; the corn was dressed four times with a cultivator, and once with the hoe; the field was kept clear of weeds through the season. About the 12th of June, put fifteen bushels of ashes round the corn; cut the stalks on the 7th and 8th of September, and harvested the corn on the 7th of October. According to the measurement of the supervisor, it yielded 107 65-75 bushels per acre. The salt applied seems to me to have had much salutary influence. The whole expense of raising the crop, exclusive of the manure; did not exceed fifteen dollars.

Respectfully submitted.

Middleborough, Oct. 8th, 1846.

Paul Hathaway's Statement.

The land on which my corn was raised, was last year sward land, the grass so destroyed by worms, that it was not worth mowing. Ploughed, the first week in September, eight inches deep, and rolled; May 6th, carted, upon two acres, ninety loads of compost manure, spread and ploughed under; 12th and 13th, planted five or six corns in each hill; came up well; seed corn selected last fall from small, well-ripened stalks with two or three ears on each stalk; contrary to my usual practice, a part was manured in the hill to the damage of the corn, producing many suckers. First week in June, harrowed twice in a row both ways; thinned my corn to three stalks in each hill, and cut out every weed. June 23d, harrowed once in a row both ways; did nothing to the hills but cut out the weeds. July 6th, sowed upon the two acres three pecks of herd's-grass seed, half bushe red top, and seventeen pounds clover seed, and raked it in. Manure, thirty cubic feet to a load. I would remark, that I consider weeds as great a pest to land as a drunkard is to society. I have used a harrow for thirty years, and weeds can no more live under a harrow than a toad. The harrow mixes and refines the earth better than any other instrument, especially where you seed to grass, which I have been in the habit of doing for fifteen years.

Corn upon a level surface will stand up better than if hilled up, for the brace roots are larger and stronger, being exposed to sun and air.

Expense.—Ploughing and rolling two acres, $4 50; carting and spreading manure, $8 50; ploughing under and furrowing, $3 00; seed corn and planting, $3 75; harrowing and weeding, $5 00; harrowing and hoeing second time, $3 00; sowing grass seed and raking in, $1 00; harvesting, $7 00; topping stalks, $2 00; half the value of manure, $33 75. Total, $72 00.

Value of Crop.—One hundred and sixty-three bushels of corn, at ninety cents, $146 70; stalks, $14 00; butts, $11 00. Total, $171 70. Profits, $99 70.

North Middleborough, Oct. 19*th*, 1846.

Nathan Whitman's Statement.

The acre of ground that I planted to corn, from which the supervisor harvested 45½ pounds, amounting to 97 5-75 bushels per acre, was greensward, of a sandy soil, and not in a good condition until I ploughed it, the 16th and 17th of May, seven inches deep; then spread forty-eight loads of compost manure, and ploughed it lightly again, not disturbing the sward; then rolled and furrowed it, with a machine fixed with the teeth of a cultivator, three feet six inches one way, and dropped the corn one foot six inches the other, putting three corns in each hill; finished planting the 20th of May. Last of June, cultivated it out twice in each row, and hoed it well in. August 1st, went through it with cultivator and cut up the weeds with a hoe.

Expense.—Ploughing and spreading manure, $4 00; manure and carting, $48 00; planting and seed corn, $5 00; hoeing and cultivating, $4 50; harvesting, $3 50. Total, $67 00.

Credit.—Corn 97 5-75 bush. at seventy cents, $67 95; corn fodder, $12 00; land improved by extra manuring, $18 00; Total, $97 95.

East Bridgewater, Oct. 1846.

Josiah Whitman's Statement.

The acre of land on which I have raised my corn, was mowed in 1845, cut one third of a ton to the acre. April 16, 1846, carted on the manure that the cattle and hogs made, and mixed with soil from near the fence, and left it in four heaps. May 6th, ploughed the ground. 19th to 23d, harrowed and furrowed it three feet apart; drew the manure from the heaps, put in the hill as near two feet apart as we could, and planted the corn, which was white, or smutty white, from the corn I raised last season, and selected when husking the same, three stalks in the hill. Five cords manure made as above stated. June 10th, cultivated and hoed it; July 15th, same; 27th, pulled out the weeds; Sept. 7th to 9th, cut the stalks; Oct. 5th, harvested.

Expense.—Drawing manure and ploughing, $3 00; harrowing, planting, &c. $5 00; five cords compost manure, $15 00; seed, 50 cts.; hoeing twice, $5 00; pulling weeds, seventy-five cents; cutting stalks, $5 00; harvesting, $7 00; Total, $44 25.

Income.—Manure not spent for use of land, top stalks, $8 00; butt stalks, $7,00; 91 55-75 bush. corn, at seventy-five cts. $68 80. Total, $83 80. Profit, $39 55.

East Bridgewater, Oct. 5th, 1846.

Anthony Collamore's Statement.

The land on which the experiment was made, to prove "the influence of sub-soil ploughing on the corn crop," was a sandy loam, had been in sward for a number of years, producing about one ton of hay to the acre. It was formerly a very rocky piece of land; many of the rocks had been removed by drilling and blasting for wall and other purposes, though a pretty good sample still remained. It was an oblong piece of ground, and contained more than an acre; one half acre on one side was measured off, and that only sub-soiled. It was manured by carting on to the sward, and spreading about twenty loads of compost manure to the acre, which was ploughed under. The compost was made from mud and soil carted into my barn cellar, and mixed with the manure from my cattle and horse and hogs; for my cellar forms a pen for the hogs, and I avail myself of their assistance in mixing the materials. This compost was hoed over and mixed in the yard a week or two before carting out. May 14th to 18th, 1846, the land was ploughed, then rolled, and afterwards harrowed lengthwise of the furrows, so as not to disturb the sod. May 20th and 21st, it was planted in rows three feet apart, and two feet apart in the row, dropping four clevels in each hill; intending to thin the crop out at hoeing time to three stalks in a hill; but, from the dry weather, and other causes, there were so many missing hills that no thinning was afterwards made. The kind of corn planted was the large white corn, called the Whitman corn. June 10th to 12th, run the cultivator twice between the rows, and hoed the first time. June 23d to 30th, cultivated and hoed a second time. July 14th, run the cultivator once between the rows. 17th, the cultivator was used again as on the 14th, and the weedy parts of the piece hoed a third time. Nothing further was done to the crop until harvest, except occasionally pulling up weeds—experiment, reason, and experience having satisfied me, that nature never designed the mutilation of this plant, by cutting the stalks for the perfection of the grain; that the farmer loses all the value of the stalks removed, in weight of the grain, besides something of its sweetness—bread made of corn suffered to grow until ripe without topping, being sweeter than that made from corn topped in the old way. A fact further confirmed by the experience of those recently engaged in the manufacture of cornstalk sugar; one writer observes, "the plan to prevent the earing must be attended to, or the sugar of the stalk will be expended in the formation of the grain." On the 6th of Oct., the supervisor selected and measured two square rods, adjoining, one on the land sub-soiled, the other on the land not sub-soiled. It was immediately cut up, and husked and weighed, and, by the statement of the supervisor, the land sub-soiled yielded forty-five pounds to the rod, making ninety-six bushels to the acre. The part not sub-soiled yielded thirty and one half pounds, making 65 5-75 bush. per acre.

Pembroke, Nov. 2d, 1846.

BRISTOL COUNTY AGRICULTURAL SOCIETY.

In the returns of this Society, the Secretary, Samuel A. Dean, states that " the Society held its twenty-third anniversary, October 14, 1846. The ploughing-match took place at 9 o'clock. Twenty-eight teams were on the ground. The display of working oxen, it was generally remarked, was the best that has been witnessed for the past ten years. The annual address was delivered by the Hon. Morrill Allen, of Pembroke."

From the reports of Committees and accompanying statements, the following extracts are made.

Ploughing.

There were seventeen ox teams entered for premiums, sixteen of which were on the ground. Six steer and horse teams were entered, and were all on the ground. Six horse teams were entered, and on the ground.

The Committee feel great pleasure in saying that the ploughing was all very well done, and think they see a decided improvement over the ploughing of 1845, and regret that the funds of the Society will not permit a greater number of premiums being awarded. Such was the skill manifested by many of the ploughmen, that the Committee found it exceedingly difficult to decide on the best work.

Ox Teams.

To Alfred A. Hall, of Raynham, 1st premium—Prouty's plough,	$6 00
Leprelet Dean, of Norton, 2d premium—Ruggles, Nourse & Mason's	5 00
Schuyler Shepard, of Mansfield, 3d premium—Prouty & Mears'	4 00

John B. Newcomb, of Norton, 4th premium—Ruggles, Nourse & Mason's	$3 00
Gardner Drake, of Mansfield, 5th premium—Prouty & Mears'	2 00

The Committee would recommend a gratuity of one dollar each, to Ebenezer Paddleford and Alvin T. Pierce, of Taunton.

Steer and Horse Teams.

To George H. Arnold, of Norton, 1st premium—Prouty & Mears' plough,	$4 00
Elijah J. Sandford, of Rehoboth, 2d premium—Ruggles, Nourse & Mason's	3 00
Jonathan Richmond, of Taunton, 3d premium—Ruggles, Nourse & Mason's	2 00

Horse Teams.

To Ezra P. Woodward, of Taunton, 1st premium—Prouty & Mears' plough,	4 00
Josiah Woodward, of Norton, 2d premium—Prouty & Mears'	3 00
Benjamin Richmond, of Taunton, 3d premium—Ruggles, Nourse & Mason's	2 00

GEO. RANDALL, *Chairman.*

STOCK.

The Committee, A. Robeson, Jr. Chairman, say that "there were entered for competition, in this class, thirteen fat oxen, three bulls, five bull calves, eight cows, thirteen heifers, two heifer calves, fifteen steers, the whole number exhibited being fifty-nine.

"A handsome native cow was exhibited, which would have been considered among the first class, but for the reason that she did not hold her milk. Upon examination, it was ascertained that the animal had not been milked this morning, which the Committee consider may account for the apparent imperfection, as the vessel was much distended. If the difficulty was real, the animal was unworthy of a premium, and if caused by the unusual treatment of not being milked, it must be considered an attempt to influence the judgment of the Committee by improper means, and, under such circumstances, the rules of the Society prohibit an award of premium."

HONEY.

The Committee, Henry S. Packard, Chairman, say "that there appears to be much more interest exhibited in the raising of honey, than in former years, and that the samples presented were very beautiful indeed. There were ten entries of honey, and the Committee award to

Simeon Green, of Mansfield, 1st premium,	-	$3 00
Barnam Hall, of Raynham, 2d "	-	2 00

Simeon Green's Statement.

I give you a short account of my bees for the present season. They have not done as well this year as usual, it having been too dry. I have eighteen swarms or colonies of bees, all but one, working in two kinds of patent hives. From these I drew thirty boxes from the upper story; part of them were well filled, the others not as well as I could wish. From the draw boxes (the tare being deducted) there remained one hundred and one lbs. of honey. The under boxes or hives, where the bees emdody, live and subsist, (with the same deduction as above) contained five hundred and forty lbs. of comb and honey, being a great sufficiency for the coming winter. My honey is all taken from the upper boxes—leaving the bees to live in the large boxes below—except they are declining under the ravages of the bee moth. In this case, I apply the torch.

My honey is sold from sixteen to twenty-five cents per pound. I have more calls for it than I can supply. Stock in bees well managed, is as good as twelve per cent., and I presume I have realized that for five years past. I send six boxes for inspection. If I have acquired any information in the management of bees, the little which I profess to know shall be freely given, to any one who will take the trouble to call upon me.

Mansfield, October 12th, 1846.

Fruits and Vegetables.

The Committee state, that the specimens of fruit were not so extensive and of so choice a variety as on some former occasions. They are such, however, as to give encouragement to our horticulturalists and orchardists to persevere in well-doing. The best specimen of apples was presented by David Arnold, of Norton, consisting of eighteen varieties, and the second best, of seven varieties, by P. Thatcher, of Attleborough. A. Robeson, Jr., of Fall River, offered four varieties of pears, one, the Duchess d'Angouleme, weighing eighteen ounces. John Pratt, of Taunton, exhibited a specimen of fine top seed, of superior weight and brilliancy; and S. Deans, of Easton, a specimen of the marrowfat species of squashes, accompanied with a statement of his method of cultivation.

Samuel Deans's Statement.

The squash herewith presented, weighing twenty-four lbs., is of the marrowfat species, and is the largest of seventeen grown upon a patch in my garden, measuring ten by fifteen feet, the whole number weighing one hundred and seventy-six lbs. I do not exhibit this so much from its magnitude, as from its being the result, in part, of a successful experiment. My garden is a light gravelly loam, and so very dry that I have never before succeeded in raising winter squashes of a medium size or quality. I determined to make one more effort, and, if I failed, to give it up. I therefore, instead of manuring in the hill as formerly, spread the manure, spaded it in, and then planted the seed, without much regard to order, permitting about eight plants to grow. These, however, proved to be too many for the space they had to occupy; for, had the vines been less numerous, the squashes would have been larger, and I probably should have had an equal amount in weight.

About the time the vines began to run, I strewed upon the ground a coating of coarse stable manure. This, I think, subserved many valuable purposes. In the first place, it prevented the growth of a subsequent crop of weeds. Secondly, it served to imprison the moisture of the earth's surface, and to prevent the otherwise more rapid drying up and induration of the ground, by the immediate action thereon of the sun's rays. It also facilitated the entering into the earth of the roots that start from the numerous joints of the vine.

By the fermentation and gradual decomposition of this superficial dressing of manure, there was also furnished, both downwards and upwards, an additional supply of nutritious matter, as food for the vine. The gases that came off by exhalation were readily taken up by the absorbent vessels of the leaves. A weekly ablution from the wash-tub, which the vines also received, was highly beneficial, especially during the dry season.

Easton, *October* 14*th*, 1846.

MANUFACTURES.

Among a variety of articles worthy of notice, the Committee would especially commend some beautiful *power-loom Ginghams*, manufactured by Charles Richmond, Esq., of Taunton. The successful application of power, in the manufacture of this article, has hitherto failed, both in Europe and this country. The object has now been fully attained by Mr. R., who is extensively producing a fine fabric, in every variety of pattern, unsurpassed even by the ginghams of France or Scotland.

Specimens of De Laine, from the Bristol printing company, were also offered, which, for brilliancy of color, elegance of style, and perfection in every particular, do great credit both to the company, and the manager of their works.

G. P. Foster, of Taunton, exhibited a window-spring invented by himself. The improvement consists in substituting springs for cords and weights,—and, from a hasty observation, the Committee were inclined to think well of it, and would commend its investigation to practical men.

Samples of steel-letter cutting were presented by Joseph W. Strange, which the Committee deemed very perfect specimens of the art.

A lot of Britannia ware by Reed and Barton, of Taunton, giving evidence of great improvement in the article, vieing in appearance with silver, added much to the brilliancy of the exhibition.

A white marble mural tablet, executed by Samuel Warren, of Taunton, a very beautiful specimen of his art.

The boots, by Mr. Dean; parlor-grate, by Mr. Field; shower-bath, by Mr. Gilmore; the rockaway by Mr. Brown, and many other articles we might enumerate, would do great credit to any similar exhibition.

Nor can the Committee fail to commend the great variety of beautiful specimens of household manufactures.—Fearing to particularize, we will venture to challenge New England, if not the world, to produce better specimens of industry, patience, perseverance, ingenuity and taste, than we have before us to-day, in the handiwork of the women of Bristol county.

SAMUEL L. CROCKER, *Chairman.*

BARNSTABLE COUNTY AGRICULTURAL SOCIETY.

In the returns of the doings of this Society, the Secretary, Charles H. Bursley, states, that "the third annual meeting and Fair of the Society was held on Wednesday, October 7th, at Barnstable. An increased interest appeared to be excited for the advancement of the Society. The number of spectators was much larger than heretofore. The show of cattle, although not large, was very creditable. The exhibition of manufactures, and fancy articles, was extensive, and some of the articles were very beautiful. The Address was delivered by Hon. Allen W. Dodge, of Hamilton. The Society is steadily advancing in numbers and zeal, and has succeeded hitherto beyond the anticipations of its most sanguine friends."

From the Report on Produce, (Melatiah Bourne, chairman of the Committee) it appears that there was awarded,—

To Alexander Baxter, for the greatest quantity of the best English hay, at one cut, on one acre, 3¼ tons,	$8
To R. Thatcher Crocker, for the best oats, and greatest quantity, being thirty bushels on one half an acre,	$3
To John B. Dillingham, for the best rye, and greatest quantity, 37½ bushels on one acre and four rods of land,	$5
To Isaiah Parker, for the best barley, and greatest quantity, 22¾ bushels on one half acre,	$3
To Russell Hinckley, for a specimen of molasses, manufactured from corn-stalks,	$1
To J. N. Lovell, for cranberries,	$5

Russell Hinckley's Statement.

Having seen several articles on the manufacture of molasses and sugar, from the corn-stalks of southern corn, I was induced to try the experiment with northern corn. Having planted a few hills in the garden, for table use, after the ears had been plucked for cooking, the stalks, one hundred and thirty in number, were cut to the ground, the leaves stripped off and the stalks chopped up. The juice was then expressed by a common cheese-press, and one gallon obtained. This was boiled down to one quart. It was then set aside to granulate, a table spoonful of lime water having been previously added, to clarify it. But, it having been over-boiled, granulation would not take place. I will only add, that it is my opinion, that every farmer might, by planting corn, in drills, and plucking the ears from a very few rods of land, manufacture his own molasses and sugar. For this purpose, a mill in the neighborhood, propelled by horse-power, would be very convenient. I will further add, that the stalks were eaten by the cattle, after the juice was expressed.

Marston's Mills, Oct. 6th, 1846.

James N. Lovell's Statement.

My cranberry bog was formerly a cedar swamp, which was covered over with beach sand. I have picked twenty square rods, a part of the cranberries on the bog being too green to pick on the 7th inst. The part which I have picked yielded, on an average, one and a half bushels to the square rod, equal to two hundred and forty bushels to the acre.

It has been my custom to keep the bog flowed with water until about the 15th of April, and I have sometimes, in August, mowed off the tops of fresh grass, that grew up in the lower part of the bog, raking it off lightly. I have, in years past, given one fourth of the cranberries to the pickers; but now find I can get pickers enough for less than one sixth when they are thick, and one fourth when they are scattering. I am offered two dollars per bushel for them, and my custom, as to measure, has been, to give nine half pecks, all struck measure, for a bushel.

In 1844, the cranberry worm commenced its ravages upon the lower edge of the lot. I immediately took wood ashes, and, while the dew was upon the vines and fruit, strewed the ashes over them, and the worms soon ceased their work. In 1845, I perceived the worm had commenced its ravages again, but did not think much of it, not believing that what I had done the year before had checked them. I was then absent about fourteen days, before I again saw the cranberries. It was too late to try to save the crop, for full one half was eaten up. I estimated the loss at fifty bushels. This year, I watched the vines, and as soon as I perceived the worms had commenced, which was on the 30th of July, I strewed, on forty rods, one bushel of fine salt, on the remainder, one barrel of lime and ashes, all done when the dew was on, and it effectually checked the ravages of the worms. I think it would be best to strew the salt, or mixture of lime and ashes, earlier than the 30th of July.

Osterville, Oct. 6th, 1846.

MILCH COWS.

The Committee on Milch Cows, Nathaniel Hinckley, chairman, award to—

Rev. E. Pratt, of Brewster,	first premium,	$8
Frederick W. Crocker, of Barnstable,	2d "	$6
Eli Hinckley, of Barnstable,	3d "	$4

E. Pratt's Statement.

The cow which I offer is ten years old, and has had nothing but the feed of the pasture the past summer. I have generally milked her myself—her milk has averaged from sixteen to eighteen or nineteen quarts per day. She had her last calf October 8th, 1845. Her milk is rich for butter.

Brewster, Oct. 6th, 1846.

Frederick W. Crocker's Statement.

I offer two milch cows; the larger, five years old, calved in April, the other, four years old, calved in May last. They have been kept on grass the last summer, and, for the past six weeks, have had daily a quantity of corn-stalks, and occasionally small potatoes, pumpkins and other vegetables. The elder cow has had, at various times, a quantity of Indian meal, the younger will not eat meal. From their milk, since the first of May last, to the present time, Oct. 7th, I have made two hundred and twenty-seven pounds of butter, besides supplying two families with milk, in one of which were sixteen persons, through nearly all the hot weather.

Barnstable, Oct. 7th, 1846.

Eli Hinckley's Statement.

The cow, (nine years old,) which I offer, has averaged ten quarts of milk per day, the last year, or thereabouts, and sixteen quarts since she calved, the 10th of August last, with common pasturage.

Barnstable, Oct. 5th, 1846.

FOREST TREES.

A premium of ten dollars was awarded to Amos Otis, as a mark of the Society's appreciation of his eminent services as a planter of pine trees.

Amos Otis's Statement.

I present the following description of two lots of land, planted with the pitch pine. The two lots are situated in the East Parish, in Barnstable, and contain, one, two acres, and the other, seventeen. The surface is uneven, and covered with moss, and, excepting a few acres, has not been cultivated for many years. The soil is mostly a gravelly loam, and is not what is generally called a pine soil. The trees on the north side of the two acre lot were planted in April, 1833, and now average thirteen feet in height, and measure one foot from the ground, four and a half inches in diameter. Those on the south side were planted the next year, and average twelve feet in height, and four inches in diameter. The seventeen acre lot was planted in the years 1840, 41, and 42. Nearly all of the trees are of the last planting, and they average nearly four feet in height.

The exact number of trees on each acre I cannot state, but I estimate that the average is much greater than is required by the rules of the Society. There are some open places, but on most of the ground there are as many trees as it would be profitable to allow to remain. On one acre, where the soil is much better than on the rest, and in the bottoms, there are no trees. The pitch pine will not grow in stiff greensward; and where the surface is a loose, barren sand, it does not flourish.

Seed.—The last of October is the best time to gather pine balls. Select those that are of the growth of the present year, spread them on a tight floor—a chamber, having windows open to the south, is a desirable place—and, before spring, the action of the sun and of frosts will open most of the cones, and the seed will drop out. The cones that remain closed may be put into pans, and placed in a warm oven to open. Before planting, the wings should be rubbed off the seeds, and all extraneous matter carefully winnowed out. A bushel of good balls will yield three pints of cleaned seed, which is a sufficient quantity for three acres.

Cost of Planting.—Previously to 1842 I planted, by ploughing furrows lengthwise of the field, eight feet apart, and dropping and covering the seed by hand, in the bottom of the furrows. A small part was planted with a hoe, without first ploughing. But both these methods are too expensive, if a large quantity of land is to be planted. In the spring of 1842, I had a machine constructed on the principle of a corn planter, with which a man and a horse can plant six acres in a day. The machine is simple in its construction, and cost less than five dollars. It operates well on all lands where it is advisable to plant the pitch pine. The cost of the seed, and planting with the machine, is less than one dollar per acre.

Growth, profit, &c. The first three or four years, the growth of the pitch pine is slow; but when it is planted, or comes up in old fields, its increase in size for twenty years will average, for each year, one foot in height, and one third of an inch in diameter. The value of land suitable for planting the pitch pine, is not usually estimated at over two dollars per acre, and it is frequently sold for one. The cost of an acre planted will not exceed three dollars. Where wood is worth three dollars a cord, standing, if no accident happens to the trees, the value of the annual growth, for twenty-seven years, may be safely estimated at one dollar for each acre. This rule will not apply to pine wood lands, for the growth there is not half so much as in old fields.

But there are drawbacks that must be taken into the account, before the balance of the profit and loss sheet is struck. Interest on the capital invested, the risk of fire, and the greater risk of destruction from the ravages of the speckled caterpillar, or pine-tree worm. It is only a few years since these pests first made their appearance in this region. Their ravages are principally confined to pines growing on lands formerly cultivated. Whenever they appear, there are myriads of them. They completely cover the branches, and, in a few days, strip the tree of all its foliage. Their name is legion. Very few trees survive their attack, and if they live, their existence is sickly, and their growth is stinted. Their ravages, thus far, have been confined to the light, sandy soil. Last year, almost every tree on a twelve-acre lot of mine was destroyed by this caterpillar. Others suffered also. This year, they have again made their appearance, and, in some places, the ground and trees are literally alive with them. If their ravages are not stayed, it is not advisable for any one to plant the pitch pine, particularly on light soils, and in the vicinity of places where the caterpillar has made its appearance.

However, there is no reason to be discouraged; if one species of trees do not succeed, we can try another. The curse of insects is chargeable to the murderous sportsman. Birds were appointed to hold the insect tribes in check, and the destruction of the one is the increase of the other.

But fear of the ravages of insects should deter no one in his attempts to cultivate trees. With all its drawbacks, I am satisfied that it is more profitable than three fourths of the crops now raised by the farmer. Nearly two centuries ago, at a time when Cape Cod was covered almost by one unbroken forest, our ancestors, year after year, in their town meetings, passed votes offering encouragement for the growth of timber, and imposing fines and penalties on him who should wantonly destroy a single tree. Then, the value of timber scarcely exceeded the cost of carrying it to market; now, the value is tripled; yet, till very recently, no one has thought it a public duty to encourage its growth, or to adopt measures for its preservation.

We have had bounties for the destruction of birds,—only another form of granting gratuities for the propagation of worms and noxious insects. We have converted our wood lands into pastures,—and all that the cattle could not destroy, man has deemed it meritorious to cut down, and uproot. Nothing has been left for beauty or shade, and nothing to break the force of the sweeping gale. But, there is beginning to be developed another and a better feeling. It is perceived that, in the cultivation of trees, pleasure and utility may be combined; that our worn-out and desolate hills may be covered with verdant and beautiful forests; that our village streets may be adorned with shady rows; and that our gardens and fields may be studded with fruit trees, without diminishing the pasturage or fertility of the farm.

Yarmouth Port, Oct. 6th, 1846.

ABSTRACT,

Showing for what objects Premiums were OFFERED *by the several Agricultural Societies in* 1846, *and the amounts of the same.*

SOCIETIES.	Bulls.	Milch Cows.	Heifers.	Working Oxen.	Greatest number of pairs of Working Oxen from any town.	Steers.	Fat Cattle.	Horses and Colts.	Sheep.	Swine.	Poultry.	Ploughing—double teams.	Ploughing—single ox teams.	Ploughing—horse teams.	Ploughing with horses or oxen.	Subsoil Ploughing.	Effects of Subsoil Ploughing.	Management of Farms.	Reclaiming Wet Meadows.	Subduing Bushes in Pastures.	Irrigation.	Experiments on Manures.	Turning in Crops as a manure.	Preparation of Compost manure.	Application of Compost manure to mowing fields.	Application of Sea Weeds.
Essex, ...	$18	$22	$12	$22	.	$28	$23	.	.	$24	.	$28	$20	$18	.	$10	$18	$55	$25	.	$22	$25	$15	.	.	.
Middlesex, . . .	20	21	30	30	.	29	14	.	.	30	.	28	28	.	.	.	.	72	40	.	.	.	.	$15	.	.
Worcester, . . .	22	30	50	43	.	47	75	.	$26	33	$14	.	55	.	.	.	.	.	.	.	.	.	.	.	.	.
Hampshire, Franklin and Hampden,	28	14	.	30	$53	29	20	$72	12	15	.	.	.	.	$40	.	.	22	10	.	.	8	9	.	.	.
Hampden, . . .	16	21	15	28	32	23	19	40	11	20	.	.	.	.	27	4	.	22	10	.	.	8	9	.	.	.
Berkshire, . . .	18	39	16	44	.	32	10	37	54	18	.	.	27	27	.	.	.	.	.	.	.	.	.	.	.	.
Plymouth, . . .	17	18	27	20	.	18	28	.	.	.	.	.	42	.	.	.	16	.	50	$16	.	89	.	16	$25	$16
Bristol, ...	44	28	14	21	.	23	18	8	10	12	.	9	20	9	.	.	.	25	.	.	.	15	.	.	.	.
Barnstable, . . .	22	18	6	21	.	9	33	13	.	.	.	.	20	.	.	.	.	16	9	.	.	.	.	15	.	.

ABSTRACT—*Continued.*

SOCIETIES.	Butter.	Cheese.	Honey and Bee Hives.	Maple Sugar.	Grain Crops.	Root Crops.	Bean Crop.	Hay Crop.	Hay Seed.	Fruits and Vegetables.	Cranberries.	Forest Trees.	Fruit Trees.	Mulberry Trees and Silk.	Cocoons and Silk.	Introduction of new and valuable Grass.	Comparative value of Crops as food for cattle.	Fattening Cattle and Swine.	Experiments to determine proper distances at which to plant corn and potatoes.	Experiments to determine proper time to cut Forest Trees, which shoot from the stump.	Implements and Inventions.	Domestic Manufactures.	Discretionary Premiums.	Whole amount.
Essex, ...	$48	.	.	.	$48	$30	$8	.	.	$30	$15	$30	$70	.	.	.	$40	$15	.	.	$10	$94	.	$823
Middlesex, . . .	10	.	.	.	42	23	.	.	.	.	10	93	73	$60	.	.	.	.	.	.	10	48	$50	776
Worcester, . . .	20	$35	.	.	.	41	.	.	.	.	.	30	.	.	.	.	.	.	.	.	.	67	50	638
Hampshire, Franklin and Hampden,	6	6	.	.	16	12	4	.	.	.	.	10	10	.	.	.	14	5	.	.	.	40	.	485
Hampden, . . .	22	22	.	.	16	12	4	.	.	.	.	10	.	.	.	.	14	5	.	.	.	40	100	550
Berkshire, . . .	12	24	.	$5	112	22	.	.	$6	9	.	.	40	.	.	.	.	.	.	.	.	101	.	653
Plymouth, . . .	22	23	.	.	67	52	10	.	.	30	17	165	.	.	$12	.	.	.	$20	$25	.	125	.	966
Bristol, ...	21	12	$5	.	45	27	8	9	.	14	15	142	15	.	.	$8	.	.	.	.	.	100	12	689
Barnstable, . . .	8	.	.	.	27	24	.	16	.	9	8	6	5	.	.	.	.	.	.	.	.	50	.	335

ABSTRACT,

Showing for what objects Premiums and Gratuities were AWARDED *by the several Agricultural Societies in* 1846, *and the amounts of the same.**

SOCIETIES.	Bulls.	Milch Cows.	Heifers.	Working Oxen.	Greatest number of pairs of Working Oxen from any town.	Steers.	Fat Cattle.	Horses and Colts.	Sheep.	Swine.	Poultry.	Ploughing—double teams.	Ploughing—single ox teams.	Ploughing—horse teams.	Ploughing with horses or oxen	Subsoil Ploughing.	Effects of Subsoil Ploughing.	Management of Farms.	Reclaiming Wet Meadows.	Subduing Bushes in Pastures.	Irrigation.	Experiments on Manures.	Turning in Crops as a manure	Preparation of Compost manure.	Application of Compost manure to mowing fields.	Application of Sea Weeds.
Essex, ...	$10	$22	$17	$22	.	$6	$10	.	$1	.	.	$28	$20	$18	.	.	.	$20	$15	.	.	.	.	.	.	.
Middlesex, . . .	20	18	24	30	.	24	14	.	.	$23	.	28	28	.	.	.	.	45	40	.	.	.	.	$10	.	.
Worcester, . . .	22	16	53	43	.	47	75	.	17	33	$15	.	55	.	.	.	.	.	.	.	.	.	.	.	.	.
Hampshire, Franklin & Hampden,	.	10	5	35	$80	36	19	$74	13	14	.	.	.	.	$41	.	.	.	.	.	.	.	.	.	.	.
Hampden, . . .	18	14	15	46	27	25	29	50	14	11	.	.	.	.	51	.	.	.	6	.	.	.	.	.	.	.
Berkshire, . . .	18	41	16	44	.	32	10	26	54	18	.	.	27	27	.	.	.	.	.	.	.	.	.	.	.	.
Plymouth, . . .	17	18	27	20	.	18	28	.	.	.	.	.	42	.	.	.	$10	.	15	$10	.	$30	.	25	$20	.
Bristol, . . .	32	28	18	21	.	27	18	10	12	11	.	9	20	9	.	.	.	.	.	.	.	.	.	.	.	.
Barnstable, . . .	19	18	6	14	.	9	21	10	.	.	.	.	11	.	.	.	.	.	.	.	.	.	.	.	.	.

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* There were also offered and awarded, as premiums, by several of the Societies, copies of Colman's European Agriculture, Washington's Letters on Agriculture, the New England Farmer, the Massachusetts Ploughman, and the Boston Cultivator.

ABSTRACT—*Continued.*

SOCIETIES.	Butter.	Cheese.	Honey and Bee Hives.	Maple Sugar.	Corn-stalk Molasses.	Grain Crops.	Root Crops.	Bean Crop.	Hay Crop.	Hay Seed.	Fruits and Vegetables.	Cranberries.	Forest Trees.	Fruit Trees.	Mulberry Trees and Silk.	Cocoons and Silk.	Introduction of new and valuable Grass.	Comparative value of Crops as food for cattle.	Fattening Cattle and Swine.	Experiments to determine proper distances at which to plant corn and potatoes.	Experiments to determine proper time to cut Forest Trees, which shoot from the stump.	Implements and Inventions.	Domestic Manufactures.	Whole amount.
Essex,	$42	.	.	.	.	.	.	$5	.	.	$37	.	.	$18	.	.	.	.	.	.	.	$3	$87	$381
Middlesex,	15	.	.	.	.	$10	$6	.	.	.	58	.	.	70	.	.	.	.	.	.	.	5	61	529
Worcester,	20	$35	.	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14	54	507
Hampshire, Franklin and Hampden,	7	6	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	98	443
Hampden,	22	14	.	.	.	.	.	.	.	.	44	.	.	.	.	$3	.	.	.	.	.	12	128	529
Berkshire,	12	24	.	$5	.	113	22	.	.	$7	9	.	.	40	.	.	.	.	.	.	.	.	107	652
Plymouth,	22	23	.	.	.	30	21	9	.	.	21	.	.	.	.	.	.	.	.	.	.	7	117	530
Bristol,	21	12	$5	.	.	4	5	5	.	.	18	.	.	.	.	.	.	.	.	.	.	.	90	375
Barnstable,	5	5	.	.	$1	18	4	.	$13	.	17	$9	$10	5	.	.	.	.	.	.	.	.	39	234

OFFICERS OF THE SOCIETIES

FOR 1846-7.

Massachusetts Society.

John C. Gray, Boston, *President*,
Daniel Webster, do. 1*st Vice President.*
Abbott Lawrence, do. 2*d Vice President*,
Josiah Quincy, Jr. do. *Corresponding Secretary.*
Elias Phinney, Lexington,
Benjamin Guild, Boston, } *Recording Secretaries.*
Henry Codman, *Treasurer.*

Essex Society.

John W. Proctor, Danvers, *President.*
Daniel Adams, Jr. Newbury,
Solomon Low, Boxford,
Asa T. Newhall, Lynnfield,
Royal A. Merriam, Topsfield, } *Vice Presidents.*
Allen W. Dodge, Hamilton, *Secretary.*
William Sutton, Salem,. *Treasurer.*

Middlesex Society.

William Spencer, Lowell, *President.*
Joseph T. Buckingham, Cambridge, 1*st Vice President.*
James Russell, West Cambridge, 2*d Vice President.*
Francis R. Gourgas, Concord, *Corresponding Secretary.*
Abiel Heywood, do. *Recording Secretary.*
John S. Keyes, do. *Treasurer.*

WORCESTER SOCIETY.

Levi Lincoln, Worcester, *President.*
Benjamin Davenport, Mendon, 1*st Vice President.*
John Brooks, Princeton, 2*d Vice President.*
John W. Lincoln, Worcester, *Corresponding Secretary.*
William S. Lincoln, do. *Recording Secretary.*
Anthony Chase, do. *Treasurer.*

HAMPSHIRE, FRANKLIN AND HAMPDEN SOCIETY.

Edward Hitchcock, Amherst, *President.*
William Clark, Northampton,
Luther Edwards, Southampton, } *Vice Presidents.*
Alonzo Lamb, South Hadley,
Wendall T. Davis, Greenfield,
J. H. Butler, Northampton, *Auditor.*
Samuel L. Hinckley, do. *Secretary and Treasurer.*

HAMPDEN SOCIETY.

William B. Calhoun, Springfield, *President.*
John Mills, do.
James W. Crooks, do.
John Wallis, Holland,
Watson E. Boies, Blandford,
Asa Lincoln, Brimfield,
Edward Taylor, Montgomery,
James Bishop, Russell, } *Vice Presidents.*
J. M. Forward, Southboro',
G. W. Granger, Tolland,
Cornelius Miller, Wales,
Aaron Ashley, W. Springfield,
R. S. Merrick, Wilbraham,
William Burt, Longmeadow,
Henry Vose, Springfield, *Secretary.*
James Brewer, 2d, do. *Treasurer.*

BERKSHIRE SOCIETY.

Joshua R. Lawton, Great Barrington, *President.*
Daniel D. Kendall, Lenox, 1*st Vice President.*

George S. Willis, Pittsfield, 2*d Vice President.*
Ensign H. Kellogg, do. *Secretary.*
Walter Laflin, do. *Treasurer.*

Plymouth Society.

Morrill Allen, Pembroke, *President.*
Anthony Collamore, do.
Joshua Eddy, Middleboro', } *Vice Presidents.*
Jesse Perkins, North Bridgewater, *Secretary.*
Artemas Hale, Bridgewater, *Treasurer.*

Bristol Society.

Cromwell Leonard, Norton, *President.*
Johnson Gardner, Seekonk, 1*st Vice President.*
George Randall, New Bedford, 2*d Vice President.*
Samuel A. Dean, Taunton, *Secretary and Treasurer.*

Barnstable Society.

John Reed, Yarmouth, *President.*
Clark Hoxie, Sandwich,
John Doane, Orleans,
Obed Brooks, Jr., Harwich,
Oliver C. Swift, Falmouth, } *Vice Presidents.*
Nathaniel Hinckley, Barnstable, *Corresponding Secretary.*
Charles H. Bursley, do. *Recording Secretary.*
Eben. Bacon, do. *Treasurer.*

ANNUAL ADDRESSES.

The Annual Addresses were delivered by the following gentlemen, viz.:

Essex Society.

Moses Newell, of West Newbury.

Middlesex Society.

John G. Palfrey, of Cambridge.

Worcester Society.

John S. Skinner, of New York.

Hampshire, Franklin and Hampden Society.

John S. Skinner, of New York.

Hampden Society.

Benjamin F. Thomas, of Worcester.

Berkshire Society.

John S. Gould, of Stockport, N. Y.

Bristol Society.

Morrill Allen, of Pembroke.

Barnstable Society.

Allen W. Dodge, of Hamilton.

☞ No Address was delivered before the Massachusetts or the Plymouth Society.

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